

MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade Name Registered in the U. S. Patent Office.

Vol. LXIII. No. 5.
WEEKLY.

BALTIMORE, FEBRUARY 6, 1913.

\$4.00 A YEAR.
{ SINGLE COPIES, 15 CENTS.

Manufacturers Record

PUBLISHED EVERY THURSDAY BY THE
MANUFACTURERS RECORD PUBLISHING CO.,
BALTIMORE.

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Branch Offices:

New York—52 Broadway.
Boston—643 Old South Building.
Chicago—1116 Fisher Building.
St. Louis—543 Century Building.

Subscription, - - - - - \$4 a year
(payable in advance) to United States,
Mexico, Cuba, Porto Rico, Hawaii and
the Philippines.

To Foreign Countries (including Canada) in
the Postal Union, \$6.50 a year.

[Entered at the Baltimore Postoffice as sec-
ond-class matter.]

BALTIMORE, FEBRUARY 6, 1913.

FOR SOUTHERN PROGRESS.

Referring to correspondence in our issue of January 30 telling of the business activities and growth of Nashville, Tenn., Secretary A. P. Foster of the Industrial Bureau of that city writes:

We beg to thank you for the service which you have performed for the city of Nashville in giving space to this article. This is one of the numerous evidences which you have shown of a desire to boost this city.

"Boost" has often a meaning of artificial devices to advance something which does not contain within itself the elements of progress. It is not used in that sense, however, by the secretary of the Nashville Industrial Bureau, for Nashville has its natural advantages. But he means to imply by his complimentary allusion to the MANUFACTURERS RECORD that this paper has been ever ready to contribute naturally to the growth of his city based upon its natural advantages. That is true as to Nashville and to every other community of the South as well as the South itself as a whole. For more than 30 years the MANUFACTURERS RECORD has endeavored within its limitations to be of service to the whole South in furthering its best development on all lines. It was founded in 1882, because at that time was felt the pressing necessity for some medium for bringing together investing capital from abroad and the unsurpassed resources of the South, and ever since that time, with a constantly and rapidly expanding field, it has made the advancement of the South its dominating purpose. Within the past 10 years expansion has been so marked as a direct result of the cumulative work of the preceding 20 years that a younger generation can hardly realize the difficulties that con-

fronted the Southern men of high hopes, broad vision and superb courage who in the eighties strove to place the South on its proper plane in American influence. Many of those men have gone to their reward, but survivors of the comparatively small group know that their dreams have become solid facts, and against the background of progress of the past 30 years they see a picture of even far greater progress in the next 30 years, a progress that will place the South on many lines far ahead of the position that the whole country occupies today.

MANUFACTURING FOR EXPORT.

The other day the *Morning Star* of Wilmington, N. C., which is working sturdily for the upbuilding of its community, pointed out that the fertilizer industry there includes 13 factories and manipulating plants with an annual output valued at \$10,000,000, that about \$3,500,000 worth of materials is imported annually, and that shipments of fertilizer to the interior alone require 14,000 railroad cars. Here are combined manufacturing, commerce and transportation in rather a striking way, and the combination emphasizes the campaign which the *Morning Star* is making in behalf of manufacturing for export. It says that Wilmington reaches out to Alabama for pig-iron export, and to that State, Georgia, the Carolinas and Mississippi for raw cotton for export, but it contends that with its access to raw materials and to power it, the city, should be doing more manufacturing, and manufacturing for export. That suggestion falls in with the contention that the MANUFACTURERS RECORD has made more than once to the effect that for Southern ports to benefit most from the opening of the Panama Canal they should take immediate steps to enter upon lines of manufacturing that will be called for by the markets made more accessible by the canal. There is great activity at a number of the South Atlantic and Gulf ports in the enlargement and improvement of terminal facilities. Such a policy is a wise one, but the point made by the MANUFACTURERS RECORD is epitomized in the statement of the writer in the *Boston Transcript*:

The prosperity of a port is determined not by the volume of freight which passes through it by quick transference, but by the volume of freight which either originates directly in the port or is stored there for redistribution.

He says that through business is comparatively not very remunerative to the ports themselves, as it leaves in the port towns only the sums needed to pay for loading and unloading; that they will find the new trade route to be a bonanza only if they are able to supply the goods of their own manufacture to meet the demands of the countries to which easy access will be for the first time possible, and he adds:

A great city is impossible today if it is only a handler of freight. It must be a producer. The interior Southern cities have

been more progressive in this way than the coast towns. Before, then, the ports can become truly prosperous they must become productive; that is, they must have factories of their own. The carrying trade alone will not make a metropolis of any town. Those Southern ports, which encourage the establishment of factories to manufacture goods for the Latin-American trade, have a great future before them; the others, no matter what their natural advantages, are doomed to disappointment.

This disinterested advice should be accepted promptly by Southern ports where possible and put into concrete action. Large increases in the volume of export and import values look well in type, but, after all, the producer of goods for sale is in a position to reap a greater reward in normal conditions than the mere handler of such goods.

THE LARGEST RAILROAD TERMINAL.

The opening of the new Grand Central Terminal in New York city was the dedication to public use of the largest railroad passenger terminal in the world. The impressive magnitude of it may be readily comprehended by comparison of figures taken from the *Scientific American* concerning large railroad stations. It contains 46 tracks, with a total length of very nearly 32 miles, and 30 platforms. The great Pennsylvania Terminal in the same city has 21 tracks, with a total length of 16 miles and 11 platforms. The new Grand Central covers in its entirety 70 acres of ground and the Pennsylvania 28 acres, but in the case of the former there is under construction and proposed an extensive group of buildings, including a couple of great hotels, an extra railroad office building, an auditorium building, styled Grand Central Palace; an express building, the post-office and a Young Men's Christian Association building, besides other structures, the character of some of which is yet to be determined.

This vast new depot takes the place of the old Grand Central Station on 42d street, and, like it, will be for the use of the New York Central lines north and west and the railroads between New York and Boston. Construction upon it began 10 years ago, and, according to the *New York Times*, the entire terminal group of buildings, will not be finished for some years to come. A remarkable fact concerning the erection of the main station, which has just been opened, is that the work upon it did not interrupt traffic at all, every provision being made by the contractors and the railroad men to handle the regular business of the various lines. To accomplish this it was necessary to spend nearly \$2,000,000 for temporary buildings, such as train sheds, walks, trestles, etc., all of which were of no further use when the terminal was completed.

The building of two such huge passenger stations as the Pennsylvania Terminal and the new Grand Central Terminal in one city and within a few

years of each other emphasizes, as hardly anything else can, the wonderful development of railroads in the United States. It is estimated that the total number of passengers using the Grand Central during 1913 will be close to 24,000,000.

SOUTH'S SHARE IN ENORMOUS WEALTH IN MINERAL PRODUCTION.

In 1880 the \$18,225,508 of minerals produced in the South constituted about 5 per cent. of the total value of the country's mineral output. Last year the Southern production of \$375,000,000 was greater than that of the whole country's in 1880, and was nearly 18 per cent. of the 1912 total output.

Since 1880 the value of the mineral output of the United States has aggregated \$32,509,610,991, included in the output being such primary manufactures as pig-iron, carrying the value of the iron ore, and articles into which clay enters. The value of the output by years is shown in the following table:

Year.	Value.
1880.....	\$364,928,298
1881.....	400,833,052
1882.....	451,901,159
1883.....	446,859,473
1884.....	406,110,405
1885.....	418,806,180
1886.....	434,137,994
1887.....	508,387,674
1888.....	524,624,536
1889.....	531,392,512
1890.....	606,476,390
1891.....	605,385,929
1892.....	622,543,381
1893.....	543,693,967
1894.....	549,374,767
1895.....	640,771,528
1896.....	640,544,221
1897.....	646,992,582
1898.....	724,372,654
1899.....	1,014,355,705
1900.....	1,107,031,392
1901.....	1,141,856,971
1902.....	1,322,943,135
1903.....	1,489,676,328
1904.....	1,362,092,768
1905.....	1,624,580,557
1906.....	1,904,011,381
1907.....	2,071,613,741
1908.....	1,594,572,055
1909.....	1,886,772,843
1910.....	2,003,744,869
1911.....	1,918,326,253
1912.....	*2,000,000,000

Total.....\$32,509,610,991
*Estimated.

These annual outputs, increasing in value from \$364,928,298 in 1880 to an estimated \$2,000,000,000 in 1912, or at the rate of 448 per cent., showed considerable variations from year to year in the first 15 years of the period, but after 1897, when the value reached \$646,992,582, there was decline in no year under the preceding year except in 1904 until 1908, when there was a decrease from the high record of \$2,071,613,741 in 1907 to \$1,594,572,055, consequent upon the financial disturbances of the winter of 1907-1908. There was marked revival in 1909 to \$1,886,772,843, and the further increase of more than \$100,000,000 in 1910, but depression in pig-iron was

manifest in the decline to the extent of about \$85,000,000 in 1911.

Of course, these increases in money values reflect the advance in prices consequent upon the lessened purchasing power of the dollar. Nevertheless, the greatness of the mineral output and its steadily increasing volume are shown in the figures dealing with some leading products.

In the thirty-three years, for instance, the country has mined 8,345,370,566 tons of coal, the annual output increasing from 71,481,570 tons in 1880 to 550,000,000 tons in 1912, or at the rate of 670 per cent.; has produced 2,686,647,133 barrels of petroleum, increasing from 26,286,123 barrels to 220,200,000

of coal, increasing from 7,002,254 tons, or less than one-tenth the total, to 130,000,000 tons, or nearly one-quarter of the total, and at the rate of 1757 per cent.; it has produced 802,578,177 barrels of petroleum, an increase from 179,000 barrels in 1880 to 85,100,000 barrels in 1912, and it has mined practically all of the phosphate rock, increasing from 200,000 tons to 3,390,000 tons.

The South today is producing within a few thousand tons of twice as much coal as the whole country produced in 1880, and more than three times as much petroleum; it is producing practically all of the sulphur, about half the pyrite and a large portion of the rock salt of the country, and the Joplin

nearly 89 per cent. of the aggregate value.

Clay products, which had a value in 1900 of \$96,212,345, had a value in 1911 of \$162,236,181, or nearly five times the value of the silver output and \$32,730,481 greater than the combined output of gold and silver. Cement had a value more than twice that of silver and an increase from 1900 of \$53,421,551, or at the rate of 402 per cent. The value of natural gas in 1911 was within \$1,900,000 of the value of petroleum in 1900, and its increase between 1900 and 1911 was at the rate of 213 per cent. The value of sulphur showed the enormous increase from \$88,100 to \$4,787,049, for which the development of the field in Southwestern Louisiana was immediately responsible. So, too, the increase in bauxite from \$89,676 to \$750,649 and of aluminum from \$1,920,000 to \$8,084,000 rests upon the development of the bauxite products of Alabama, Arkansas, Georgia and Tennessee, and of fuller's earth from \$67,535 to \$383,124, largely upon the developments in Florida.

All these facts emphasize the growing importance of the South in the mineral industries of the country, which must attain far greater proportions, especially with the realization of the unmeasured opportunities in that section for the development of the minerals essential to chemical industries.

A MILLION OF DOLLARS A DAY.

Although attentive readers of news know that the annual earnings of the Pennsylvania Railroad system have for several years exceeded the three-hundred-million mark, the figures which the company has just issued, covering its operations during 1912, showing that the earnings averaged more than a million dollars each day, will make them stop and think, at least for a moment, of the tremendous progress revealed by the statement that the mere increase of gross earnings as compared with 1911 was well-nigh \$37,000,000 and the total gross earnings were \$371,440,120. At this rate of gain the earnings of the system for 1913 will pass the four-hundred-million mark, with several millions to spare. The net earnings averaged over \$225,000 per diem, their total being \$82,268,426, or an increase of approximately six and three-quarters millions of dollars as compared with 1911. This seems to indicate that annual net earnings of one hundred millions or more are not far away.

The increase of gross earnings is something astonishing. A gain of more than \$36,896,000 is greater than the gross earnings of some important railroad companies. It is greater than the gross operating revenues of the Atlantic Coast Line during its last fiscal year, for instance. It is more than thrice as great as the gross earnings of the Mobile & Ohio Railroad. It is larger by \$8,000,000 than the gross revenues of the Missouri, Kansas & Texas system. It is one and one-half times as large as the earnings of the Seaboard Air Line last year, thrice as great as the earnings of the Nashville, Chattanooga & St. Louis Railway, over two and one-half times as great as the gross earnings of the Central of Georgia, greater than the total revenues of the Chesapeake & Ohio system, and so on, these comparisons with some of the most important railroads in the South only emphasizing the magnitude of the Penn-

sylvania's business and in no measure diminishing their importance.

It must be borne in mind that the foregoing figures are those of the combined Pennsylvania system both east and west of Pittsburgh, its roads east of that city being operated under the name of the Pennsylvania Railroad Co. and those to the west being known as the Pennsylvania Lines West. The gross earnings during 1912 of that part of the system east of Pittsburgh were \$174,607,598, an increase of \$17,120,184, and the net revenues, after deducting operating expenses, including taxes, were \$40,807,773, an increase of \$8,374,821.

The progress of the Pennsylvania Railroad system since the opening of the old Pennsylvania Railroad in 1850 is one of the wonders of the world of transportation.

EFFICIENCY OF THE NEGRO.

Every right-minded person desires that the negroes in this country shall make the most of themselves materially and in every other respect. Probably no other race in the world has had more done by other races for its improvement and advancement than the negro race in the 300 years since its first members to come to this country were brought here in duress, and the solicitude for it since its members were emancipated as a result of the war has been surpassed in the history of no other race. Folks are beginning to take an inventory of the progress of the race since emancipation measured by its accumulation of wealth. One recent estimate from an enthusiastically sympathetic viewpoint calculated that the negroes' holdings in land, live-stock and other forms of property now aggregate about \$700,000,000. It is believed that that is a decidedly conservative estimate, and that \$900,000,000 would be closer to the actual fact. That, of course, is a merely flat statement and takes no account of the character of the holdings, whether burdened with mortgages or otherwise, and no account of what is being done with the holdings, especially land. When such factors are considered in connection with the incalculable aid from others which has been given the negroes there is really very little room for undue elation at their progress. Emancipation, with the subsequent intrusion, in the guise of special care for the negroes, of influences bitterly hostile to the whites of the South, loosened the ties of sympathy and interest of the Southern whites and the negroes and alienated the second generation of both races from each other. In that the negroes lost much of the advantages their fathers had had in close contact with the directing minds of the South, and the results must be considered in studying negro progress. A strong light on the situation was thrown last week in a lecture by Dr. Ulrich B. Phillips of the University of Michigan when he said:

A number of quadroons and mulattoes and occasional negroes follow white men's habits of thought and have white men's economic ambitions, but the great mass of negroes in the Southern black belts are in a quite different category. And as a general rule the denser the negro population the more perfectly negro-like are the habits of the negroes in thought and action.

The cotton industry affords the best opportunity for the study of past and present conditions in this regard, because of the great number of negroes employed and because of the fullness of census statistics.

In the antebellum regime slavery permitted the whites to keep the negroes under

Increase in Mineral Production.

Mineral.	1911.	1910.	1900.
Coal	\$626,366,876	\$629,557,021	\$396,688,164
Pig-iron	327,334,624	425,115,235	259,944,000
Clay products	162,236,181	170,115,974	96,212,345
Copper	137,154,092	137,180,257	98,494,093
Petroleum	134,044,752	127,896,328	75,989,313
Gold	96,890,000	96,269,100	79,171,000
Stone	77,108,567	76,520,584	36,970,777
Natural gas	74,127,534	70,756,158	23,698,674
Cement	66,705,136	68,752,092	13,283,581
Lead	36,553,320	32,755,976	23,561,688
Silver	32,615,700	30,854,500	35,741,100
Zinc	30,964,794	27,267,732	10,654,196
Sand, molding, etc.	19,614,850	19,530,919	.....
Lime	13,689,054	13,894,962	6,797,496
Phosphate rock	11,900,693	10,917,000	5,359,248
Salt	8,345,682	7,900,344	6,944,603
Aluminum	8,084,000	8,955,700	1,920,000
Mineral paints—zinc oxide	7,842,583	7,500,371	4,311,299
Mineral waters	6,837,888	6,357,590	6,245,172
Gypsum	6,462,035	6,523,029	1,627,203
Slate	5,728,019	6,236,759	4,240,466
Sulphur	4,787,049	4,605,112	88,100
Asphalt	3,828,751	3,080,067	415,958
Sulphuric acid—smelters	2,733,696	.....	.....
Borax	1,569,151	1,201,842	1,018,251
Glass sand	1,543,733	1,516,711	.....
Antimonial lead	1,380,556	1,338,090	.....
Pyrite	1,164,571	958,608	749,991
Talc—soapstone	1,032,732	864,213	393,541
Quicksilver	977,989	958,153	1,302,586
Grindstones	907,316	796,294	710,026
Sand-lime brick	897,664	1,169,153	.....
Bauxite	750,649	716,258	89,676
Talc, fibrous	613,286	728,180	499,590
Fluorspar	611,447	430,196	94,500
Feldspar	597,008	502,452	180,971
Tungsten ore	407,985	807,307	11,040
Fuller's earth	383,124	293,709	67,535
Mica	355,804	337,097	147,990
Precious stones	343,692	295,797	233,170
Uranium and vanadium	305,500	.....	.....
Graphite	288,465	377,176	197,579
Peat	272,114	140,209	.....
Oilstones, etc.	214,991	228,694	174,087
Quartz	155,122	193,757	86,351
Infusorial earth, etc.	147,462	130,006	24,207
Nickel	127,000	.....	3,886
Barytes	122,792	121,746	188,089
Abrasive garnet	121,748	113,574	123,475
Asbestos	119,935	68,367	16,310
Manganiferous ore	115,918	186,765	.....
Bromine	110,902	41,684	140,790
Pumice	88,399	94,943	.....
Magnesite	75,000	74,658	19,333
Arsenic oxide	73,408	52,305	.....
Tin	56,635	23,447	.....
Platinum	40,890	25,277	2,500
Manganese ore	24,586	22,892	100,289
Corundum, etc.	6,778	15,077	102,715
Chromic iron ore	1,629	2,729	1,400
Thorium, etc.	802	12,006	48,805
Titanium ore	.....	44,480	1,300
Unspecified	250,000	300,000	1,000,000
Total	\$1,918,326,253	\$2,003,744,869	\$1,107,031,392

barrels, or at the rate of 740 per cent.; has mined 41,562,053 tons of phosphate rock, increasing from 211,377 tons to 3,400,000 tons, or at the rate of 1509 per cent., and has used 800,000,000 tons of iron ore in making 423,560,604 tons of pig-iron.

In this progress the South has played a constantly increasing part. It is, to be sure, not living up to its full potentialities in iron-making, but in the thirty-three years it made 66,258,721 tons of pig-iron, or nearly 16 per cent. of the total, and increasing from 448,978 tons in 1880 to 3,054,980 tons in 1912, or at the rate of 588 per cent. Meanwhile it has mined 1,645,203,500 tons

district in Missouri dominates in production of lead and zinc.

Both in value and in quantity the great increase in mineral production has taken place since 1900. Comparison of 1910 and 1911 with 1900 is made in the accompanying table:

It is interesting to note that in 1911 of sixty-one specified mineral products, five represented more than 72 per cent. of the aggregate value. They are coal, \$626,366,876; pig-iron, \$327,334,624; clay products, \$162,236,181; copper, \$137,154,092, and petroleum, \$134,044,752. They, with four others, gold \$96,890,000, stone \$77,108,567, natural gas \$74,127,534 and cement \$66,705,136, represent

control and to transfer that control from hand to hand. And with slavery there was closely associated the plantation system, which provided a definite routine of simple tasks and provided supervision to insure their performance. It provided also a certain degree of industrial and social education for the negroes. In fact, plantation slavery permitted capable managers to make of typical American negroes as efficient a labor force as the world has ever seen under any form of coercion.

To compare negro efficiency in cotton production before and since the war, it is necessary to select districts where no great economic change has occurred except the abolition of slavery—where there has been no large introduction of commercial fertilizers, for example, and no great ravages by the boll-weevil. A typical area for our purpose is the Yazoo delta in Northwestern Mississippi. In four typical counties there—Tunica, Coahoma, Bolivar and Issaquena—in which the negro population numbers about 90 per cent. of the whole, the per capita output of cotton in 1860 was two and one-third bales of 500 pounds each, while in 1910 and other average recent years it was only one and a half bales per capita. That is to say, the efficiency of the negroes has declined 35 per cent. A great number of other black belt counties indicate a similar decline.

On the other hand, the white districts throughout the cotton belt, and especially in Texas, Oklahoma and Western Arkansas, have so greatly increased their cotton output that more than half of the American cotton crop is now clearly produced by white labor. Other data of wide variety confirm this view of negro industrial decadence and white industrial progress.

Dr. Phillips has for many years been a close first-hand student of the negro problem, and his deductions may be regarded as those of an expert worthy of serious attention by everybody interested in the welfare of the negro. Another point to be borne in mind in measuring progress is the fact that the property of nearly 12,000,000 negroes in the United States today has a value less than half the value that 3,954,000 of them in slavery, or 90 per cent. of their total number in the country, represented in 1860, at an average value of \$600 each, and not as much at the average value of \$300 apiece, which was paid for 3300 of them in the District of Columbia by the United States Government when they were emancipated in 1862 after the war had reduced their value.

SOUTHERN PIG-IRON.

The South made its record production of pig-iron in 1906, when its output was 3,525,119 tons in a total output for the country of 25,307,191 tons. In 1908 the country's production fell to 15,936,018, lower than it had been since 1901, and the South's production fell to 2,369,741 tons, lower than it had been since 1898. There was a gradual increase each year in the whole country and in the South until 1911, when the country's output fell to 23,649,547 tons and the South's to 3,011,154 tons. Last year the country had its greatest output in any one year, 29,727,137 tons, an increase over 1911 of more than 25 per cent. But there was only a slight advance in the South, the increases of 150,698 tons in Alabama and of 13,590 tons in Tennessee offsetting by only 43,826 tons the decreases in the other Southern States. The outputs of 1911 and 1912 by States are compared in the following table:

	1912.	1911.
Alabama.....	1,862,900	1,712,211
Georgia.....	35,000	38,163
Kentucky.....	68,760	95,202
Maryland.....	219,546	255,816
Tennessee.....	338,238	324,648
Virginia.....	256,167	293,642
West Virginia.....	274,360	291,472
Total.....	3,054,980	3,011,154
United States.....	29,727,137	23,649,547

*Estimated as including Missouri and North Carolina.

INDUSTRIAL ACTIVITIES SOUTH.

During January the Construction Department of the MANUFACTURERS RECORD published 5469 items relating to industrial, building, railroad and financial development in the South and Southwest. These items have appeared daily in the *Daily Bulletin* and weekly in the *MANUFACTURERS RECORD*, and, summarized under descriptive headings in the accompanying table, they present a fine showing for one month, while they indicate for the year great activity along the various lines of general business and industrial development.

"Machinery, Proposals and Supplies Wanted" columns have contained 532 requests for information and prices on machinery and supplies, estimates on contracts, etc., these coming mainly from Southern correspondents, but also from interested parties in other sections of the United States and from foreign countries, the latter including Panama, Cuba, Chile, Germany, Russia, China and Turkey.

The table follows:

Industrial and Developmental.	
Bridges, Culverts, Viaducts.....	60
Canning and Packing Plants.....	20
Cottonworking Plants.....	23
Coal Mines and Coke Ovens.....	46
Concrete and Cement Plants.....	9
Cotton Compresses and Gins.....	21
Cottonseed-oil Mills.....	13
Drainage and Irrigation.....	45
Electric Plants.....	100
Fertilizer Factories.....	18
Flour, Feed and Meal Mills.....	19
Foundry and Machine Plants.....	74
Gas and Oil Enterprises.....	122
Ice and Cold-storage Plants.....	59
Iron and Steel Plants.....	6
Land Developments.....	128
Lumber Manufacturing.....	128
Metal-working Plants.....	19
Mining.....	74
Miscellaneous Construction.....	55
Miscellaneous Enterprises.....	159
Miscellaneous Factories.....	262
Motors and Garages.....	41
Railway Shops, Terminals, Roundhouses, etc.....	19
Road and Street Work.....	173
Sewer Construction.....	73
Telephone Systems.....	32
Textile Mills.....	64
Water-power Developments.....	24
Water-works.....	91
Woodworking Plants.....	49
Buildings.	
Apartment-houses.....	107
Association and Fraternal.....	44
Bank and Office.....	106
Churches.....	102
City and County.....	79
Courthouses.....	27
Dwellings.....	419
Government and State.....	23
Hotels.....	79
Miscellaneous.....	101
Railway Stations, Sheds, etc.....	63
Schools.....	156
Stores.....	310
Theaters.....	33
Warehouses.....	71
Railroad.	
Railways.....	185
Street Railways.....	37
Financial.	
Corporations.....	261
New Securities.....	374
Burned, etc.....	4621
Machinery, Proposals and Supplies Wanted.....	532
Total for January.....	5469

THE COTTON MOVEMENT.

According to the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, the amount of cotton brought into sight during the first five months of the present season was 10,842,400 bales, a decrease under the same period last year of 710,499 bales. The exports were 6,252,581 bales, a decrease of 470,688 bales. The takings were, by Northern spinners, 1,656,925 bales, an increase of 100,026 bales; by Southern spinners, 1,714,942 bales, an increase of 328,960 bales.

Record Making Year in Iron.

OUTPUT IN THE UNITED STATES IN 1912 WAS 29,727,137 TONS.

The bureau of statistics of the American Iron and Steel Institute has received from the manufacturers complete statistics of the production of all kinds of pig-iron in the United States in 1912. Every furnace has been heard from. Detailed statistics will be found in the accompanying statement. The figures for the first half of 1912 were compiled by the American Iron and Steel Association and for the last half of the year by the bureau of statistics of the American Iron and Steel Institute.

The total production of all kinds of pig-iron in 1912 amounted to 29,727,137 gross tons, against 23,649,547 tons in 1911, an increase of 6,077,590 tons, or over 25.6 per cent. Several thousand tons of ferro-phosphorus, ferro-titanium, ferro-vanadium and other alloys are included for both years. The following table gives the half-yearly production of all kinds of pig-iron since 1908:

Periods.	1908.	1909.	1910.	1911.	1912.
First half.....	6,918,004	11,022,346	14,978,738	11,666,996	14,072,274
Second half.....	9,018,014	14,773,125	12,324,829	11,982,551	15,654,863
Total.....	15,936,018	25,795,471	27,303,567	23,649,547	29,727,137

The production in the second half of 1912 shows an increase of 1,582,589 tons as compared with the production in the first half of that year.

The production of pig-iron by States was as follows:

Production—Gross tons. (Includes spiegeleisen, ferro-manganese, ferro-silicon, ferro-phosphorus, etc.)		First half of 1912.	Second half of 1912.	Total for 1912.
States.		1912.	1912.	1912.
Massachusetts.....	8,793	8,793	8,793	17,586
Connecticut.....	2,773	2,773	2,773	5,546
New York.....	880,581	880,581	1,068,650	1,949,231
New Jersey.....	2,773	2,773	34,103	36,876
Pennsylvania.....	6,035,773	6,035,773	6,516,196	12,551,969
Maryland.....	107,027	107,027	112,519	219,546
Virginia.....	120,127	120,127	136,040	256,167
Alabama.....	887,512	887,512	975,397	1,862,909
West Virginia.....	129,155	129,155	145,205	274,360
Kentucky.....	24,017	24,017	44,743	68,760
Tennessee.....	145,076	145,076	193,162	338,238
Ohio.....	3,285,752	3,285,752	3,516,885	6,802,637
Illinois.....	1,304,227	1,304,227	1,583,132	2,887,359
Indiana.....	782,352	782,352	982,376	1,764,728
Michigan.....	153,430	153,430	149,950	303,370
Wisconsin.....	348,096	348,096	348,096	696,192
Minnesota.....	109,789	109,789	197,942	307,731
Colorado.....				
Oregon.....				
Washington.....				
California.....				
Total.....	14,072,274	15,654,863	29,727,137	

In the following table are compared productions in the past five years:

Production—Gross tons. (Includes spiegeleisen, ferro-manganese, etc.)		1908.	1909.	1910.	1911.	1912.
States—Gross tons.						
Massachusetts.....		13,794	18,388	16,582	9,649	17,586
Connecticut.....		2,773	2,773	2,773	2,773	5,546
New York.....		1,019,495	1,733,675	1,938,407	1,562,756	1,949,231
New Jersey.....		235,372	294,474	264,781	40,663	36,876
Pennsylvania.....		6,987,191	10,918,824	11,272,323	9,807,073	12,551,969
Maryland.....		183,502	286,850	326,214	255,816	219,546
Virginia.....		320,458	391,134	444,976	293,642	256,167
Georgia.....		24,345	26,072	14,725	1,300	.....
Texas.....		1,763,014	1,763,017	1,939,147	1,712,211	1,862,909
Alabama.....		65,551	229,282	174,661	291,472	274,360
West Virginia.....		45,096	86,371	100,509	95,202	68,760
Kentucky.....		290,826	333,845	397,569	324,648	338,238
Tennessee.....		2,861,325	5,551,545	5,762,112	5,310,506	6,802,637
Ohio.....		1,691,944	2,467,156	2,675,646	2,108,002	2,887,359
Illinois.....		348,096	964,280	1,250,103	1,163,932	1,770,628
Indiana.....		148,938	348,177	307,200	276,807	303,370
Michigan.....						
Wisconsin.....						
Minnesota.....						
Missouri.....						
Colorado.....						
Washington.....						
California.....						
Total.....		15,936,018	25,795,471	27,303,567	23,649,547	29,727,137

The production of Bessemer and low-phosphorus pig-iron in 1912 was 11,667,656 tons, against 9,409,303 tons in 1911, an increase of 2,258,353 tons, or over 24

per cent. In the second half of 1912 the production was 6,095,301 tons, as compared with 5,572,355 tons in the first half. The production of low-phosphorus pig-iron alone in 1912 amounted to 282,359 tons, as compared with 282,460 tons in 1911.

The production of basic pig-iron in 1912, not including charcoal of basic quality, was 11,394,477 tons, against 8,520,020 tons in 1911, an increase of 2,874,457 tons, or over 33.7 per cent. In the second half of 1912 the production amounted to 5,989,101 tons, against 5,405,376 tons in the first half, an increase of 583,725 tons. The production in 1912 was the largest in our history the year of next largest production was 1910.

The production of charcoal pig-iron in 1912 amounted to 347,025 tons, against 278,676 tons in 1911, an increase of 68,349 tons. A small quantity of pig-iron made with charcoal and electricity is in-

cluded in the figures for 1911 and 1912. In the first half of 1912 the production amounted to 166,366 tons, and in the second half to 180,659 tons. No pig-iron was made in 1911 or 1912 with mixed charcoal and coke.

The production of spiegeleisen and ferro-manganese in 1912 was 221,725 tons, against 184,718 tons in 1911, an increase of 37,007 tons. The production of ferro-manganese alone in 1912 was 125,379 tons, against 74,482 tons in 1911. Of spiegeleisen alone the production in 1912 was 96,346 tons, against 110,236 tons in 1911.

PETROLEUM IN 1912.

Review of Activities in the Southern Fields.

In New York the average decline in production of oil in 1912 was checked by the extensive cleaning out of old wells, stimulated by the rising prices of oil, according to David T. Day of the United States Geological Survey, but the yield in New York State is now so small that even the increase in price has not stimulated much drilling of new wells. Drilling of gas wells, however, was fairly active.

In Pennsylvania an unusually good well was drilled in June, 1911, by Potts Bros.

Production—Gross tons. (Includes spiegeleisen, ferro-manganese, etc.)		1908.	1909.	1910.	1911.	1912.
States—Gross tons.						
Massachusetts.....		13,794	18,388	16,582	9,649	17,586
Connecticut.....		2,773	2,773	2,773	2,773	5,546
New York.....		1,019,495	1,733,675	1,938,407	1,562,756	1,949,231
New Jersey.....		235,372	294,474	264,781	40,663	36,876
Pennsylvania.....		6,987,191	10,918,824	11,272,323	9,807,073	12,551,969
Maryland.....		183,502	286,850	326,214	255,816	219,546
Virginia.....		320,458	391,134	444,976	293,642	256,167
Georgia.....		24,345	26,072	14,725	1,300	.....
Texas.....		1,763,014	1,763,017	1,939,147	1,712,211	1,862,909
Alabama.....		65,551	229,282	174,661	291,472	274,360
West Virginia.....		45,096	86,371	100,509	95,202	68,760
Kentucky.....		290,826	333,845	397,569	324,648	338,238
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Indiana.....		148,938	348,177	307,200	276,807	303,370
Michigan.....						
Wisconsin.....						
Minnesota.....						
Missouri.....						
Colorado.....						
Washington.....						
California.....						
Total.....		15,936,018	25,795,471	27,303,567	23,649,547	29,727,137

& Fife on the Stewart Park lots, in Cannonsburg, on the east edge of Washington county. Over 30 wells were drilled on town lots as rapidly as they could be

put down, the best yielding about 600 barrels a day. By the spring of 1912, however, the pool had declined very much, in spite of efforts to extend the producing area farther to the north. In Allen county several wells yielding as much as 25 barrels a day were drilled in the neighborhood of Pine Creek and in the Perrysville pool. In Butler county the increased value of old oil wells due to the rise in price of oil was made evident by the purchase of 300 acres of land, including 24 producing wells, at a price that approximated \$2250 per barrel of production. This is the highest price which has been paid in this region in 20 years, and is evidence of the great "staying qualities" of these wells. Interest in the county was also stimulated by the striking of a 100-barrel well on the Dodds farm, in Penn township. Another 100-barrel well was obtained in the old Bristoria pool in Greene county.

In West Virginia the remarkable development in the Blue Creek pool, Kanawha county, begun in September, 1911, aroused greater enthusiasm than any other development in recent years. The first well was drilled by the Ohio Fuel Oil Co. simply to protect a lease which was about to expire on the Bart-Schwartz land. A good gusher was obtained. Next the Edwards Oil Co. struck a 720-barrel gusher on the farm of the Graham heirs. Gushers of much greater size followed quickly, drilled by the Ohio Fuel Oil Co., the Hamilton Co. and others. It is interesting to note that in 1864, when drilling began at Burning Springs, in Wirt county, it extended up Elk Creek to the mouth of Blue Creek. A Mr. Goddard also leased the present Blue Creek region, but did not drill.

In 1912 the field extended rapidly to the northeast and the southwest, until it attained a length of about 10 miles. In May its highest production was reached—25,000 barrels a day—but wells were drilled so close together that a decline was inevitable, and by June 17 the production was estimated at 20,000 barrels, and 12 days later had declined to 16,000 barrels a day. In July much new production was added, but the old wells declined so rapidly as to offset the increase, and production settled down to 15,000 barrels, by the middle of August to 13,000, and a month later to 8500. By the middle of October it had increased slightly to 10,000 barrels, and at the end of the year there was a steady production of 8000 barrels. Meantime, the excitement caused by this unusual development extended the drilling of the Falling Rock Creek pool and the Big Sandy district, both adjoining the Blue Creek pool. The former started with a 100-barrel well on September 21, and the interest still continued at the end of the year. The oil comes from the Berea grit. The big Sandy region obtained a gusher of 2000 barrels a day late



THE MOLTON HOTEL, BIRMINGHAM.

To be erected for T. H. Molton, Birmingham; site 50x190 feet; six stories, possibly eight; if six stories, will have 104 bedrooms, 44 bathrooms; if eight stories, 146 bedrooms, 62 bathrooms; fireproof construction; electric elevators; low-pressure steam heat; composition roof; cost \$200,000; architect, H. B. Wheelock, Birmingham; contractor for excavation, Fred A. Jones Building Co., Birmingham, Dallas and other cities.

in October, which quickly settled down to 200 barrels a day, coming also from the Berea grit. There is a prospect of considerable production from various extensions of the Blue Creek pool, especially in Clay county and Lincoln county. Roane county was second to Kanawha in the interest aroused during the year. A 50-barrel well was obtained early in February, 1912. Late in the year the Spencer district was developed in the Berea grit, and wells yielding from 100 to 450 barrels a day were very common. Prospecting was active in the old Shinnston district, in Harrison county, and on October 5 a 500-barrel well was obtained half a mile north of Shinnston. Before the end of the year sufficient oil was obtained to extend the old Shinnston pool half a mile to the north, with wells which held up satisfactorily. Other wells which developed interesting prospects during the year in West Virginia are in Calhoun, Cabell, Boone, Gilmer, Ohio, Pleasants, Ritchie, Tyler and Wetzel counties.

In Kentucky during the entire year unusual interest in oil operations was shown throughout the State. By persistent efforts in Lawrence county many small wells were obtained in the Little Blaine Creek district, and the average initial production of only 10 barrels a well was increased by striking a number of wells of 25 barrels. In October the pool was yielding 100 barrels a day, the wells being good stayers. Pipe-line facilities were afforded during the year. The greatest interest in Kentucky came from the finding of a 200-barrel gusher on July 3 in Ohio county. The oil is of good quality. The gusher was obtained at 1800 feet. Several shal-

lower wells (1000 feet) have shown 10 to 15 barrels each. Late in October another well, good for 20 barrels, was put down, and in the same month two wells were obtained in Allen county at the same depth. This stimulated much prospecting in Muhlenburg, Hopkins, Webster and Logan counties, all in the western part of the State. In Morgan county, besides the project of piping gas to West Liberty, the finding of a well flowing 50 barrels of light-green oil from a depth of 2000 feet aroused interest. In August the old Wayne county field was extended into McCreary county by the striking of a 100-barrel well. The wells in the old Wolfe county field were obtained at slight depths, and active preparations were made to extend the drilling to strike the Berea grit, in the hope of better developments at that depth. Meanwhile, the old field was extended four miles to Stillwell Creek.

In Tennessee drilling was active in many parts of the State, especially in the neighborhood of Franklin, where, in addition to a considerable yield of natural gas, there is some prospect of obtaining oil.

In Louisiana many large gushers were obtained in the Caddo field, but their yield was not sufficient to prevent a decline in production. A well drilled at Pine Prairie, south of Alexandria, gave 1200 barrels of oil a day for a short time and led to much drilling, which has not yet resulted in further production. The oil is intermediate in character between the light oils of the Caddo field and the asphaltic oils of the Gulf Coast. Vinton continues to be of interest. Several large wells were brought in during the year.

In the Gulf Coast region of Texas drill-

ing was sufficient to maintain good production from the older fields without the decline which might normally be expected. Interest centers in the high-grade oils found in the Electra and Petrolia fields, in Wichita and Clay counties, on the northern edge of the State. Developments in the Electra field were very satisfactory during the year, and not only led to wildcatting in the adjacent counties, but stimulated activity in distant counties, resulting in a good outlook for an oil and gas field at Trickham, in Coleman county. At Burkburnett, on the northern edge of Wichita county, a good well was brought in by the Corsicana Oil Co., and the development of a considerable field is probable. These developments also stimulated much drilling in the adjoining counties of Oklahoma.

The decline in stocks in Oklahoma which began at the close of 1911 continued throughout 1912, with corresponding increases in prices and activity in drilling. In April A. Malarkey, in deepening an old well southwest of Cleveland, Pawnee county, obtained a good flow. Similar drilling by the Paova, Gypsy, Milliken and other oil companies was successful in obtaining wells yielding from 75 to 1500 barrels a day from the Cleveland sand, which is thought by some to be near the Bartlesville sand. An oil pool of even greater interest was developed by the drilling of a well 10 miles east of Cushing, in Creek county, by Slick & Jones, which yielded 150 barrels a day in a sand found at 2181 feet. Two miles east of this Wrightsman & Jones drilled into the sand at 2185 feet and obtained a gas well yielding 5,000,000 cubic feet a day. This stimulated drilling which has developed a pool rivaling the old Glenn pool in interest. In addition to two interesting developments in Osage and Kay counties, the shallow sand of Nowata county was extended considerably to the west. Additional developments of natural gas were made in the neighborhood of Poteau, and further interesting gas wells were obtained in the vicinity of Duncan, in Stephens county. The outlook at the end of 1912 was for very active wildcatting in many portions of the State as well as much greater development of the proved areas.

For Gadsden.

The Gadsden (Ala.) Real Estate Exchange has been organized as an auxiliary of the Gadsden Chamber of Commerce with W. J. Beggs, chairman; N. H. Sewall, vice-chairman; W. H. Lumpkin, secretary. Board of control—Messrs. E. W. Whips, E. R. LeFevre and T. W. Morrow. This is the second of such auxiliaries which have been formed by Secretary L. C. Busch for the purpose of making Chamber of Commerce work here effective, the first being the Retail Merchants' Association.



CATAWBA RIVER BRIDGE NEAR CHARLOTTE.

This bridge an important link in National Automobile Highway from New York to Jacksonville; bridge recently completed; cost nearly \$70,000; length of concrete spans of main bridge, 1670 feet; length of concrete part of secondary bridge, 250 feet; length of approaches, 863 feet; five 161-foot reinforced concrete arches over river proper and twenty-one 40-foot girder spans over lowlands; foundations to bedrock; hollow piers sand-filled, with breakwater on upstream side and anchored to bed with 60-pound rails; abutments of solid type, 44-foot depth; floor system of approaches carried by two girders supported by columns spaced 40 feet center to center, expansion joint in floor at every third bolt; columns rest on spread reinforced footings to firm soil; Portland cement furnished by Southern States Portland Cement Co., Rockmart, Ga.; Birmingham steel and lumber; bridge design by Wilbur J. Watson & Co. of Cleveland, O.; built by C. W. Requarth Company, Charlotte.

Louisville's \$5,000,000 Sewers

MODERN SYSTEM APPROACHING COMPLETION AFTER FIVE YEARS' WORK.

[Special Correspondence Manufacturers Record.]

Louisville, Ky., January 31.

With the system of great trunk sewers provided for by the proceeds of a \$4,000,000 bond issue in 1907 practically complete, the Board of Sewer Commissioners of Louisville, which has had charge of this work for the past six years, is preparing to turn the system over to the engineering department of the city for further work amounting to \$1,387,500. This sum, which is now available in cash, is designed for expenditure in the construction of a comprehensive network of laterals, supplementing the system of trunk sewers already constructed, and making with it a complete and efficient unit for the thorough drainage of the city.

When the Board of Sewer Commissioners took up its work, in the latter part of 1906, the city was very inadequately provided with main outlet sewers, and the first and principal object of the commission and its engineers was to design and begin the construction of mains proportioned to the size of the city and its rapid growth. To this end have been completed in the years since the great southern outfall sewer, running almost the entire length of the southern part of the city; the northwestern sewer, draining an older part of the city, as well as a section not yet built up; the western interceptor, designed to relieve an older sewer in the western part of the city; the Happy Hollow main, draining a section of low land; the Beargrass interceptor, relieving a congested condition in the heart of a thickly-populated district, and the partial concreting of the bed of Beargrass Creek, which does important drainage work, especially in carrying off storm water.

The city's needs in the matter of disposal were great, both as to storm water and in sanitary sewage. Beargrass Creek, meandering through the city for several miles, has always been relied upon to take care of an enormous amount of surface water and sewage; other streams to the south of the city furnished some additional drainage, and a few storm sewers had to take care of heavy rains. There were very few sanitary sewers, compared to the size of the city, pits and cesspools being the common method of draining even the larger buildings in the heart of the city.

Along Main street, for instance, the great wholesale thoroughfare, which is for the most part as old as the city itself, there are blocks which are entirely without sewers. With the river almost at its back, this street and the old business houses which line it for several miles was drained for years in the primitive manner described or not at all.

It was nearly a decade ago, however, that the city awoke to the need for a real sewer system, more nearly adequate to the growing needs of its population, then approaching the quarter-million mark, and for sanitary drainage along modern lines. Out of a realization of the inadequacy for this purpose of the annual appropriations available, which seldom reached \$100,000, came the decision in favor of a bond issue large enough to handle the job properly, and the sum of \$4,000,000 was fixed upon as being fairly close to the mark.

Under the laws of Kentucky lateral sewers as well as mains must be paid for by the municipality. This fact has been responsible for the condition of the city

with reference to sanitary sewers serving residences and buildings, and necessitated the expenditure of about \$816,362 of the \$4,000,000 derived from the bond issue being spent for lateral sewers, the remainder being used in the construction of the great mains designed to serve the whole city.

The work was placed in the hands of a special bi-partisan board of sewer commissioners, composed of four members and the Mayor. Some months were consumed after the issue had been favorably voted on in November, 1906, in the preliminaries inseparable from an undertaking of such magnitude, the forming of an organization, looking over the ground and planning the work. An important part of the initial work was the production of a complete detailed topographical map of the city, in which the Federal Geological Survey co-operated. The commission's chief engineer in charge of the work from the beginning is J. B. F. Breed, who has been assisted by Harrison P. Eddy of Worcester, Mass., as consulting engineer and J. H. Kimball of Louisville as designing engineer.

The largest and most important work done by the commission was the construction of what is known as the southern outfall sewer, a great horseshoe conduit of monolithic reinforced concrete something like six and a half miles long, 15½ feet in diameter at its lower end, where it empties into the Ohio, and about four and a half feet at its smallest point. It begins at a point in the southern part of the city and runs in a general western and northwestern direction to the river. This sewer alone cost about \$1,543,111, and drains a vast area.

Another important section of the commission's work has been the concreting of the channel of Beargrass Creek for a distance of about 2500 feet. As indicated, this stream performs very important offices in the drainage of a thickly-settled portion of the city, and the work of the commission, in constructing a deep, straight bed in its course, has had the effect of straightening the stream and rendering it capable of much more efficient drainage work. Very little of the Beargrass Creek work as planned by the commission remains to be done, and with it the commission will have completed its labors; that is, it will have expended, in a manner which is unanimously acknowledged as splendidly capable and economical, the sum entrusted to it.

In connection with the Beargrass Creek part of the work was the construction of the Beargrass interceptor, a sewer designed to relieve the stream of the sewage formerly discharged into it by numerous mains. This is regulated in such a manner as to permit the creek to carry the sewage when there is an ample volume of water, the interceptor, which follows its course, carrying the sewage at all other times. From a sanitary standpoint this is perhaps the most important, as it is certainly the most noticeable, work the commission has done, the condition of the creek in periods of low water at former times being that of an open sewer with hardly sufficient flow to carry the mass of matter turned into it. The concrete work in the creek itself cost \$135,000, and the interceptor \$420,646.

The engineering department of the city now plans, as a part of the work which it has on the program for the next two

years, to carry the concreting of the bed of the stream 4500 feet further south, at an estimated cost of \$250,000, and making drainage still more rapid.

Among the other large mains constructed under the commission were the northwestern sewer and the western interceptor, connecting with the southern outfall in the extreme western part of the city near the river (which is both north and west of the city), and running about 9000 feet through the central western section, draining a large area not heretofore served, and also relieving the old western outfall, built years ago, of a portion of its excessive load.

The design of the commission, as already stated, was to provide the city with adequate main trunks, leaving the construction of such laterals as could not be built at once to future work, and so well has this principal object been accomplished that it is estimated that the mains now finished will serve the city's needs for the next 40 years.

The city's engineering department, headed by City Engineer David R. Lyman, who is assisted by Roy W. Burks as assistant city engineer in charge of sewer construction, proposes taking up the work where the commission left off when its funds were exhausted and bring the system to a state approximating something very like perfection. The city is extremely fortunate in having available for this purpose an additional fund, independent of current revenues, of \$1,387,500. This sum was realized by the sale of certain gas stock owned by the municipality for many years, and the statute authorizing the sale required the application of the proceeds to the construction of sewers. With a comprehensive system of mains already constructed, together with many laterals, the department feels that within two years it can so dispose of this very respectable sum as to give the city finally a splendid drainage system.

Inasmuch as the sewer commission devoted most of its time and money to the construction of main trunk sewers, little of this work remains to be done, the great need of the city being adequate sanitary laterals. Following the same idea as that body, however, the engineering department has already let two contracts, aggregating \$60,000, for what might be termed sub-mains; one known as the 23d street sewer, a 69-inch affair connecting with the southern outfall and designed to drain a large area which the outfall was partly designed to serve, and the other on 32d street, running from 60 inches down, and draining a somewhat thinly-settled section in the western part of the city into the southern outfall.

The material used in these larger sewers now being built is comparatively new in sewer construction, being a patented type of interlocking block known as segmental vitrified tile, manufactured by the American Sewer Pipe Co. of Akron, O. This material has been found so far to be the cheapest for the large sewers, although the department proposes to let all bids under a proviso permitting figures to be handed in on either this material, concrete pipe or vitrified pipe, awarding the contract to the lowest bidder, regardless of material. The greater part, if not all, of this work will be done under contract. All sewers under 30 inches, which includes all of the laterals, will be constructed of ordinary vitrified pipe, and this means by far the greater part of the work, inasmuch as about 90 per cent. of the work to be accomplished is in the construction of laterals.

Besides the two contracts already let for mains, and another now under consideration, there is only one other main

planned at the present time by the department, and that is a three-block section in the extreme western part of the city designed to serve Market street, the principal thoroughfare in that vicinity, and an area altogether covering about two square miles, which has recently been annexed to the city. The city has already constructed a main in South Louisville, a thickly-populated section which is low and flat, and has always been subject to overflows in time of heavy rains, this being another of the sub-mains served by the big southern outfall. Laterals will now be constructed in this vicinity to make this main available in that whole section, giving adequate drainage to a manufacturing and residence district of considerable importance.

Practically all of the sewers constructed by the commission, as well as those constructed and planned by the city's engineering department, are combination storm and sanitary sewers. Save in the case of Beargrass Creek, all sewage is now drained to the river itself; and, as explained, Beargrass Creek does not now carry sewage except when there is plenty of water to dilute the solid matter carried, thus eliminating any possibly objectionable features, such as render an open sewer a stench in the nostrils and an open menace to health in summer and other periods of comparatively dry weather.

The work already done has unquestionably improved the sanitary condition of the city immeasurably over its former state, and, as in the case of the Happy Hollow main, constructed by the sewer commission to drain a pond in the northwestern section, has resulted in the reclamation of large sections, turning waste land into valuable industrial property. With the completion of the laterals whose construction is rendered possible by the gas stock fund, Louisville will have a sewer system which will be as nearly complete as that of any municipality in the country.

In its nature a sewer system must grow with the growth of the city; but as far as is possible, this necessity has been foreseen in the work described and planned, and save for repairs and slight additions from time to time, it is not likely that Louisville will have any occasion to give much attention to the problem of sewage disposition for many years when the last of the fund now available has been expended.

G. D. CRAIN.

Birmingham Iron Market.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., February 3.

The local pig-iron market continues quiet, and additions to order-books in January was probably less than for any time during the past six months, as the buying movement, which was fully expected, failed to materialize. The volume of inquiry submitted during the month just closed was very attractive, indicating considerable business yet to be placed for requirements in first half, but on account of the unsettled conditions caused by the offering of resale iron at concessions and the change in political situation, the trade is apparently more disposed to await further developments. However, producers no doubt booked more tonnage prior to first quarter for delivery during this period and first half than has been reported, as there are no indications of weakening, and while the market is without interest and shipments only normal, \$14 per ton at Birmingham for No. 2 foundry is the minimum quotation adhered to by all interests for delivery prior to July 1. The recent sale of a round tonnage for export proved somewhat of a

stimulant, and while the amount of same is not made public, it is understood the price consideration was somewhat better than the minimum quotation mentioned above. Aside from this, transactions within the week were confined to carloads and lots of 150 to 300 tons for prompt shipment, and were small in the aggregate. Of this last, one lot of 300 tons of No. 2 soft, with an exceptionally low sulphur content, sold for \$15 per ton at furnace, and another lot of standard No. 2 foundry brought \$14.50 per ton at furnace. The continued offering of resale iron at figures ranging from \$13.25 to \$13.75 per ton at Birmingham, while not considered a fair representation of the market, is affecting conditions to a certain extent and causing the trade to hesitate before covering for additional requirements, but as the tonnage is limited, a slight buying movement would eliminate this feature and the market regain its normal state. Movements from furnace yards during the month just closed were quite satisfactory, but it is not believed will equal production, as the make for that period will probably show a substantial increase over any record for the past 18 months. With one exception, the entire available capacity was in full operation during the entire month, there being seven stacks operating on basic and 17 on foundry grades during the first part, and 8 and 16, respectively, the latter part, with two on charcoal iron. To this will be added, probably the latter part of this month or early in March, Oxmoor furnace of the Tennessee Coal, Iron & Railroad Co., which is now being repaired, and the new 300-ton stack of Woodward Iron Co., nearing completion, and is expected to be in operation within the time mentioned. The grades to be produced by the plants just referred to will depend entirely upon conditions of the foundry market at the time. In the meantime, however, the present active capacity may show some alteration, as one or two are scheduled for relining at an early date. In view of the present conditions, it cannot be stated with emphasis that the market is strong, but until further developments we quote below the several grades per gross ton at Birmingham for delivery in first half, viz.: No. 1 foundry, \$14.50 to \$15; No. 2 foundry, \$14 to \$14.50; No. 3 foundry, \$13.75 to \$14.25; No. 4 foundry, \$13.50 to \$14; gray forge, \$13.25 to \$13.75; mottled, \$13.25 to \$13.75; standard basic, \$14 to \$14.50.

Low-grade cast scrap, No. 1 machinery and steel scrap proved to be the best sellers in the old-material market within the past week; however, such transactions consisted of carload lots, but were satisfactory in the aggregate. Aside from this, the market was exceptionally quiet, but, owing to the small accumulations of the several grades, quotations are firm, and the following are believed to be a fair average of what dealers are asking for their holdings per net ton f. o. b. Birmingham, viz.:

Old iron rails (light), \$15.50 to \$16.
Old steel axles (light), \$15.50 to \$16.
Old iron rails, \$15.50 to \$16.
No. 1 railroad wrought, \$13.50 to \$14.
No. 2 railroad wrought, \$11 to \$11.50.
No. 1 country, \$9.50 to \$10.
No. 2 country, \$8.50 to \$9.
No. 1 machinery, \$11.50 to \$12.
No. 1 steel, \$11.50 to \$12.
Tram car wheels, \$11 to \$11.50.
Standard car wheels, \$12.50 to \$13.

An order for 3000 tons of water pipe for prompt shipment to Seattle, Wash., was the only transaction of any size reported by the local cast-iron pipe manufacturers, but the number of small orders received was very attractive. The follow-

ing quotations are reported fully maintained per net ton f. o. b. Birmingham, viz. Four-inch, 24.40; six-inch and up, \$22.50, with \$1 per ton extra for gaspipe. Special fittings are quotable at \$47.50 to \$55 per net ton at foundry, depending upon size and nature of the requirement.

There are no new developments in the finished material market. The production of all local mills is sold far in advance, necessitating operation at full capacity, and such new business entered is accepted conditionally.

The steam and domestic coal market is only normal, as the demand for both grades has been relieved by liberal shipments and the recent mild weather. However, prices are more firm, as the mining scale was increased 2½ cents per ton, effective February 1, which is the highest price paid for mining since 1907.

Foundry coke is very firm, and moving in good volume. Standard Alabama 72-hour coke is quotable at \$4 to \$4.25 per ton at ovens.

FOR AN INTERURBAN CENTER.

San Antonio Interested in Comprehensive Electric Railway Plans.

[Special Cor. Manufacturers Record.]

Chamber of Commerce,

San Antonio, Tex., January 30.

San Antonio, the only large city in Texas at the present time without any interurban railway, is soon to be the center of one of the most extensive interurban systems in the State. Business men of this city have dreamed of interurbans and talked interurbans for several years, and now a definite movement has been started which will soon connect this city with the State Capital and also make this the center of a network of lines extending to adjacent county-seats on several sides. The scheme also includes an interurban line to the Medina Valley dam, about 40 miles west of San Antonio, and to the lands of the Medina Valley Irrigation Co., about 25 miles below the dam.

The San Antonio & Austin Interurban Co. has been chartered, with representative business men of San Antonio, Austin, New Braunfels and San Marcos among the stockholders. It has a capital stock of only \$25,000, having been formed merely for the purpose of making the necessary surveys, securing the right of way for the line and making estimates on the volume of business that may be expected. When its work has been completed a larger corporation will be formed to finance and construct the line. Incorporators hope to remove as soon as possible the line from the possibility stage to a railway in actual operation.

One of the principal men in the organization is W. B. Tuttle, vice-president of the San Antonio Traction Co., the property of the McMillan syndicate. Associated with him are leading bankers and capitalists in Southwest Texas, among them Franz C. Groos, president of the Groos National Bank and one of the officers of the Medina Irrigation Co.; R. R. Russell, president of the State Bank & Trust Co.; Frederick Terrell, president of the City National Bank; J. D. Oppenheimer, W. J. Moore, L. J. Hart, John J. Stevens, Sam C. Bell and Voorhies P. Brown, all bankers and capitalists; Ed. Rand, Dr. Frank Paschal, F. L. Hillyer, W. C. Rigsby, Henry L. Half, Jake Wolff, Sam L. Harris, Otto Wahrmond, Otto Koehler, H. G. Staacke, J. H. Kirkpatrick, Edwin Chamberlain, H. Bruhn and Harry Landa, all men of large means and many of them at the head of large business houses. Among the Austin stockholders is Geo. W. Littlefield, president of the American National Bank and

one of the wealthiest cattle raisers in the country.

The first portion of the interurban line to be built will be between San Antonio and Austin, a distance of approximately 85 miles. The estimated cost of this part of the work will be between \$2,000,000 and \$3,000,000. As soon as the preliminary work has been attended to the larger corporation will be organized to finance the actual construction, and a certain amount of 6 per cent. non-accumulative preferred stock of this corporation will be taken by citizens of San Antonio, Austin, New Braunfels, San Marcos and other points. Assurances have been given that the right of way in each county will be furnished free of cost, and the promoters of the company say it will not be difficult to place the bonds if the local people show their appreciation of the advantages of interurban service and their confidence in the future development of the communities by purchasing the preferred stock which will be offered.

Three routes between San Antonio and Austin are being considered. One of these is to follow the main highway along the line of the two railroads between the two cities. Another is to follow the line of these two railroads but to avoid traveling along the highway. The third plan is to build the road out of San Antonio slightly north and east to Seguin, and from there in an almost direct line to Austin, passing through Martindale and other rich farming communities which are distant some 12 or 15 miles from the line of the International & Great Northern and the Missouri, Kansas & Texas railways. If this latter route is adopted, branch lines will be built into New Braunfels and San Marcos from the nearest points along the main line.

After the interurban line between San Antonio and Austin has been completed it is probable that the line to the Medina dam and irrigated farms south of it will next be built for the rapid development of intensive farming in the San Antonio territory will make interurban connection imperative within a very few years.

C. G. MORTON,

Assistant Secretary.

BIG MISSISSIPPI LAND SALE.

English Capital to Develop Mainly by Growing Cotton.

The Dyer Creek Cotton Estates Co., controlled by English capitalists and cotton spinners of London and Memphis, has purchased more than 25,000 acres of Mississippi land for about \$2,000,000. This property is located in Sharkey and Issaquena counties, in the Mississippi and Yazoo valleys, extending 17 miles along the Yazoo delta, and it includes various plantations, buildings, cotton gins, several towns, etc. The land is being and will continue to be developed, especially for cotton growing, to which it is especially adapted. The sale was effected by W. S. Biles & Co. of Memphis and St. Louis. It is reported they hold 49 per cent. of the stock of the new holding company, and will appoint the managing officials. Referring to this transaction, H. L. Albert of the St. Louis offices of Biles & Co., is quoted as follows:

"The money is paid by an English syndicate, composed largely of master spinners of Manchester, England. Of the lands involved, practically 15,000 acres is under cultivation, and the remainder will be rapidly transformed for the purpose of growing long staple cotton. The land lies in one body, and extends for 17 miles along the main line of the Yazoo and Mississippi Valley Railroad, and also along the Illinois Central system. The deal is

not only one of the largest ever consummated in the South, but it also sets a land value record for that section."

The Biles Company, according to Mr. Albert, still holds between 12,000 and 15,000 acres in the delta territory, which it will continue to operate.

Standard Steel Co.

The sale of the Southern Iron & Steel Co. was held at Birmingham last week, and the property was bid in by Frederick H. Buss and Daniel Holman, representing Eastern interests not controlled by the reorganization committee, but not opposed to it. James Bowron, trustee in bankruptcy, conducted the auction, and sold the property at \$1,530,000. It is understood this purchase carries with it the assumption of a mortgage of \$8,000,000, and that the sale has been confirmed and an agreement made whereby the unsecured security holders, who had raised objection to the confirmation of the sale, have an opportunity to be interested in the reorganization plans. The Standard Steel Co. has been incorporated to take over the properties, and Mr. Bowron wires the MANUFACTURERS RECORD as follows:

"New company formed under name of Standard Steel Co. Directors, S. H. Voorhees, Harry Bronner and A. H. Wickwire, all of New York, together with James Bowron, president; H. Sanborn Smith, vice-president, and A. R. Forsythe, secretary-treasurer. Future plans not developed. No details can be given at present."

Big Plant for West Point.

Through the efforts of the land and industrial department of the Southern Railway a large plant for paper pulp manufacture will be located at West Point, Va., and will doubtless give an impetus to the development of the West Point territory. This plant will be built by the Chesapeake Pulp & Paper Co., which has incorporated with \$300,000 capital stock and elected Harold W. Nichols of Cincinnati, president-manager, and Melville T. Nichols of Boston, treasurer. All improvements and construction will be undertaken under contract, the buildings to be of cement and brick and practically fireproof, with sprinkler systems. A 24-acre tract has been secured, and construction will begin promptly under the direction of George F. Hardy, 309 Broadway, New York, who is the architect in charge. This will be the first unit, the annual capacity to be about 12,000 tons of wet pulp, and other units are planned for the future. The Messrs. Nichols are interested in the Fox Paper Co. of Lockland, O., and have had many years successful experience in the manufacture of paper.

Drainage to Cost \$3,000,000.

The Coldwater Drainage District has been organized to construct a drainage system, and its plan calls for the complete diversion of the Coldwater River into Horn Lake, the main canal to be 15 miles long. The district embraces about 350,000 acres of land in portions of Tunica, De Soto, Panola, Tate, Quitman and Coahoma counties. Referring to this project, the Morgan Engineering Co., Memphis, Tenn., wires the MANUFACTURERS RECORD as follows: "The commissioners are H. W. Crenshaw of Crenshaw, Miss.; Lee Lesser of Tunica, Miss., and M. R. Cox of Marks, Miss. The probable cost is \$3,000,000. The commissioners will receive bids for the preliminary bond issue."

The proceedings of the eighth annual meeting of the West Virginia Board of Trade, held last fall, have been published in attractive pamphlet form.

Road Construction.*

By E. A. KINGSLEY, Highway Engineer of Pulaski County, Arkansas.

Until a few years ago but little importance was attached to our road work and but little attention was paid to it. Each political division or community maintained a semblance of a road construction and repair department. These departments, however, were made up of appointees largely for political purposes rather than for the purpose of building or maintaining roads. Our own State, much to our detriment, has had a surplus of political road departments, consequently many of our roads have been built without regard to line, to grade, to permanence. In fact, they have not been built at all.

Under the new order of things these conditions are rapidly passing away. Our county judges are looking up the scientific end of road work and are watching more closely the work and expenditures of their road departments. The Government has been of great assistance in this respect through the road literature and lessons it has given and is furnishing, and our State associations are of great benefit in the work they are doing.

Actual road building may be divided into three classes—main roads, secondary roads and neighborhood roads. Each class of roads requires to be studied and treated differently, according to the traffic it sustains, the soil upon which it is built and the material with which it is built. It is not my desire nor intention to launch into a discussion as to the best materials for every road and how to use them. We just want to cover a few of the essentials and leave them for you to carry further.

The first-class roads may be considered the main roads, radiating from the larger cities or towns. These roads usually carry a diversified and oftentimes a very heavy traffic. Such roads should be built to a maximum width and with light grades and straight alignment. The metal surface on such roads, while built in the same general way, should be built heavier than for roads of the lighter classes. In fact, the entire treatment for roads of the first class should be of the strongest and best. And the engineering design should be carefully worked out and the plan followed.

Roads of the secondary class will include those cross-roads leading from the main roads to small communities, or roads from cities and towns which are not through roads, yet carry considerable traffic. The same general treatment should be given these roads, but the widths oftentimes need not be so great. The question of distance is not so vital as in the case of the first class roads, consequently in hilly or swampy country the alignment can be changed to run around the heavy grades or streams. The surface treatment need not always be so heavy as with the roads of the first class. The same care in planning, in selecting materials and in the execution of the work, however, should be used as in building the heaviest traffic thoroughfare.

Neighborhood roads and private roads are those built to provide means of outlet for the few to a main road. Treatment of such roads will depend largely upon the wealth of the neighborhood. We will assume that only the ordinary road is built. It is seldom that a rock surface will be built in such roads. If gravel be close and plentiful, a thin course of gravel

is sometimes used to great advantage. In the clay and "buck-shot" land, a little sand spread and worked judiciously into the soil will give a splendid wearing surface.

One of the most serious defects in building a road is to build it so narrow that wagons when passing track into the gutter. The flow of water is stopped in a short time and the berm is flattened out and soon ruined. Gutters are obliterated, and the whole right of way becomes the road; wagons are drawn hither and yon, and the roadbed becomes a mass of ruts. Decide upon the width of berm and throw it up so high that water will not bother it. Give the road plenty of crown, and it will drain itself. Then give your gutters good depths and slope and sufficient grade to carry the water, and you have built well.

These two essentials, a correct location both as to alignment and grade and a properly constructed berm, with well-built side ditches, having been obtained, but one more thing remains to be accomplished. This is to care for the cross-water. Openings or waterways across a road should be carefully planned to care for a maximum fall of water. In a timbered country, where roads are not heavily traveled, small wooden structures are permissible. Or where lumber is very cheap and traffic very light, the longer bridges may be frame or pike structures. But as a general thing it is a wise plan to establish a rule to make all culverts and bridges permanent. This will mean vitrified tile or concrete. The first cost is a little greater than is the cost of a timber structure, but the future maintenance cost is removed entirely. With a small organized crew and careful buying, you will be surprised at the small cost of concrete culverts. A word of caution, however: Don't forget your engineer. Do not take anyone's word for the large or small amount of water to care for. Have your culverts designed to carry the maximum amount of water. Then build permanent concrete culverts, or if the price on pipe is lower, put in vitrified pipe culverts.

In sandy country clay will make a big change. But even old Mother Earth, be the soil buck shot, clay or loam, will give good results on such roads when kept well crowned, with ditches open.

Regardless of the class of your road, the first essential is its location. The course should be as nearly in a straight line as is practicable, bearing in mind the fact that the road should serve nearly equally as many people as possible. Railroads are always built to serve the most people. So in building your wagon roads, if a deviation from a straight course will serve more people, the straight alignment should not be too closely adhered to. Secondly, avoid heavy grades. The load which a team can handle on a road depends not upon the average, but the maximum grade.

The location of the road selected and the grades established, the next question is the actual construction work. First in importance is the roadbed. A road surface is but a roof over the roadbed. A flat roof without gutters to carry off the water will very quickly leak. So, too, a flat road without proper gutters will very quickly get full of holes and become no road at all. The roadbed must be graded to a sufficient width to amply care for the traffic. I do not mean by this that city streets must be made of country roads. All roads, however, should be graded sufficiently wide to easily allow two vehi-

cles to pass upon them. At each side of the road good gutters should be built and they should be far enough to either side to permit the passing of vehicles without forcing either the horses or the wagon wheels into the gutter.

After the roadbed has been prepared acceptably, then the wearing surface may be put on. We shall not go into detail as to macadam or gravel construction. This would be too long a discussion. Each community must be handled as seems best, all conditions being taken into consideration. Select the material with regard to traffic conditions, considering, of course, both the first cost and maintenance. It is often the case that local material may fill the requirements on one road, while on another the same material might not be at all satisfactory. Select your wearing surface material carefully, weighing each point both for and against it and balancing them so as to obtain the best results. In applying the wearing surface two things are very necessary, and both have often been neglected, to the detriment of the road. Much water for either gravel or macadam is needed, and continued rolling until a perfect surface is obtained is necessary. All roads should be planned before being built, and the plans should be carefully followed.

The most serious troubles we experience are in trying to keep up our roads after they are built. We have narrow-tired wagons which are loaded down far beyond capacity. Then we have the rapidly moving automobile, with its enormous suction. And lastly there is the teamster, with his wagon loaded to the limit, who will lock his wheels on every grade, regardless of the damage done the road. Macadam roads and graveled roads are torn to pieces and raveled out. Dirt roads are rutted up and worn full of holes. The old adage, "A stitch in time saves nine," was never more aptly used than in connection with road maintenance.

Every macadam or graveled road should have a near supply yard of repair material close at hand. The material should be protected so that it will not get full of debris, but will remain ready for use. When a hole develops it should be scarified with pick and rake sufficiently to allow new material to knit. Then enough new material should be added and tamped into the worn place to bring the road back to perfect surface. If the weather is dry, plenty of water should be used, as the rock or gravel will not knit and bind satisfactorily unless it is thoroughly wet. A careful watching and slight repairs when needed will maintain your road in good condition.

The customary way to maintain dirt roads is to allow them to grow up with weeds and to allow the gutters to entirely fill up, forcing the water to the road from what was originally the gutter. When the road becomes impassable the weeds are cut and thrown into the roadway. By means of light plowing, a road grader or a slip, the roots are drawn with a little surface soil into the roadway. The roadway is sometimes surfaced a little after this operation, but more often it is left with a ridge in the middle consisting of alluvial soil, weeds and roots mixed well and piled loosely to a height of 18 to 24 inches.

It is not difficult to keep in reasonably good shape these dirt roads, but they must be built so as to drain themselves. It is necessary to keep their surfaces smooth and free from ruts. And let me emphasize the necessity for dragging. Grade up your road and keep your ditches open. Throw your grass roots and weeds to one side and burn them.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Further details of highway undertakings and bond issues mentioned below are given under the headings Construction Department and New Securities, published elsewhere in this issue.]

Bonds to Be Voted.

Bay City, Tex.—Matagorda county votes March 1 on \$300,000 bonds for road construction.

Cullman, Ala.—Cullman county votes March 10 on \$230,000 bonds for road construction.

Shreveport, La.—City votes March 4 on \$100,000 bonds for resurfacing and graveling streets.

Temple, Tex.—City votes in April on \$170,000 bonds for eight miles street paving.

Contracts Awarded.

Brooksville, Fla.—City awarded contract to construct 40,000 square yards vitrified brick pavement in business section; amount available, \$19,950.

Pikesville, Ky.—City awarded contract for 25,000 square yards street paving.

San Angelo, Tex.—City awarded contract to construct 40,000 square yards asphalt macadam pavement on concrete base.

Sweetwater, Tex.—City awarded contract at about \$50,000 for 40,000 square yards asphalt paving on concrete base.

Contracts to Be Awarded.

Abilene, Tex.—City will improve 16 streets.

Atlanta, Ga.—Park Board will expend \$15,000 during year to improve roadways in Grant Park.

Dallas, Tex.—Texas Motorway Co. will construct 60 miles rock ballast road.

Martinsville, Va.—City receives bids until February 27 to construct 2000 yards granolithic walk.

Melville, La.—City opened bids February 4 to construct concrete sidewalks; cost \$5000.

Palacios, Tex.—Matagorda county invites bids to shell 10 miles of road.

Petersburg, Va.—R. E. McPherson and others will construct five miles of road.

San Benito, Tex.—City will pave six blocks of Sam Houston avenue; proposed to use wood blocks on concrete base.

Selma, Ala.—City receives bids until February 7 to construct 28,000 yards of either asphalt, wood block or hansom pavement on concrete foundation.

Waycross, Ga.—City receives bids until February 18 for laying of 6000 square yards asphalt blocks and construction of 4500 linear feet granite or concrete curbing.

Mississippi Banks.

Healthy finance in Mississippi is reflected in a publication by State Auditor D. L. Thompson of statements showing the conditions on December 18, 1912, of 332 State banks and 31 National banks in the State. The statements, disregarding fractions, summarized, show for State banks aggregate resources of \$85,837,123, capital \$12,844,925, surplus and undivided profits \$5,525,059, and individual deposits \$54,423,710, and for National banks aggregate resources \$25,702,470, capital \$3,355,000, surplus and undivided profits \$2,412,342 and individual deposits \$13,305,105. Compared with conditions on June 7, 1911, the State and National banks showed an increase in resources of \$12,234,070, in capital, surplus and undivided profits \$255,856 and individual deposits \$13,404,602.

*From an address before the State Good Roads Convention at Little Rock.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

ANNISTON TO COLUMBUS.

An 85th Meridian Railroad Plan for Great Lakes to the Gulf Traffic.

Charles J. Swift, Columbus, Ga., writing to the MANUFACTURERS RECORD concerning the proposed Columbus, Chattahoochee Valley & Gulf Railroad gives the following particulars:

The route follows in a general way the eighty-fifth meridian of longitude, which marks a direct line for vessels from the port of Apalachicola, Fla., south across the Gulf of Mexico and through the Yucatan channel to and from the Panama Canal. From Apalachicola northward the railroad line selected is along the Apalachicola and the Chattahoochee rivers 267 miles to Columbus, Ga.; thence 40 miles to Lagrange and 20 miles farther to Franklin, Ga. From the latter point the line swings northwest 60 or 70 miles to Anniston, Ala., where there is connection with other railroads to Chattanooga, Cincinnati and other important points in the Middle West on up to the Sault Ste. Marie Canal. The proposed road, in connection with lines north from Anniston (or by new construction north of there if need be) would solve the problem of providing transportation between the Great Lakes and the Gulf at once adequate and economical.

The construction projected immediately is between Anniston and Columbus. From Anniston to Franklin there is no railroad, and the route to be used would have no line on either side at a less distance than 20 miles; from Franklin to Lagrange there is no railroad on either side for 15 or 20 miles; from Lagrange to Columbus there would be none on either side nearer than 20, 15, 10, 8 miles, and these shorter distances would occur only because of the convergence of one railroad near Columbus. From Anniston to Columbus the total distance would be less than 125 miles.

At the south of Franklin the new road would be in the Chattahoochee Valley, and the propriety of thus designating it would be correct from Lagrange to Columbus. From Columbus down the Chattahoochee Valley on the Georgia side to a point where the proposed route would connect with the Georgia Southern & Gulf Railroad from Albany the distance would be less than 125 miles. For this whole distance, for 10 or 12 miles on either side, there will be no rival line.

From Franklin to its mouth the Chattahoochee River is crossed by at least 13 railroads, belonging to systems which have never projected along the course of the navigable part of the river, nor above Columbus, where navigation ceases, and the line to be built from Anniston via Franklin, Lagrange and Columbus to a junction with the Georgia, Southwestern & Gulf Railroad to St. Andrews Bay will make a saving of distance by land and water from the Great Lakes to the Panama Canal. In the same way it will make a saving from Chattanooga, Gadsden, Anniston and the great resources of the Coosa and Tennessee rivers country.

Josiah Flournoy of Columbus is chief engineer of the railroad company.

WAYCROSS & WESTERN WORK.

More Than Half of the First Contract Complete—Stock and Bond Issue.

President Alex. K. Sessions of the Waycross & Western Railroad Co., Waycross, Ga., writes concerning the progress of

construction that the Empire Construction Co., which was given the contract to build and equip 38 miles of line from Waycross to Sirmans, Ga., has already constructed 25 miles and has turned over to the railroad company 21 miles completed. Work is being pushed on the remainder, and the contractor expects to have it finished within three months.

As to the increased stock and bond issue, the Empire Construction Co. will take the bonds and part of the stock as payment for building and equipping the road.

The stockholders recently voted to increase the capital stock from \$250,000 to \$710,000 and also to issue \$710,000 of bonds.

OVER POTTS MOUNTAIN.

Inclines and Lumber Railroad to Be Built Into Johns Creek Valley.

C. P. Lewis, county surveyor of Monroe county, Sweet Springs, W. Va., writes that the Tri-State Lumber Co. of Uniontown, Pa., operating mills at Sutherland, Lick Run and Hookersville, W. Va., will build an incline railroad from a point near Rays Siding, on the Norfolk & Western Railway near Waiteville, W. Va., over Potts Mountain to Johns Creek Valley, in Craig county, Virginia, and a narrow-gauge railroad two miles long on the other side of the mountain to provide facilities for hauling out the timber recently purchased on 30,000 acres of land at the headwaters of the creek, this being part of a tract of 108,000 acres known as the "Chambers Survey." It is understood that the Craig-Giles Iron Co., which bought the 30,000 acres of land a few years ago, has reserved the land and mineral rights in the deal.

It was at first proposed to construct a narrow-gauge railroad for the entire distance over the top of Potts Mountain between Johns Creek Valley and Ray's Siding, and this plan would have required the building of eight or nine miles of track. The inclines and narrow-gauge railroad now planned will be about three and one-half miles long. On the north side of the mountain the incline will be 2194 feet long and that on the south side about 3400 feet. The railroad will reach to the bottom of the valley, where it is proposed to erect the principal mill plant, but a number of smaller mills will also be put up in other parts of the valley. There are from 100,000,000 to 150,000,000 feet of timber to be cut and hauled over the mountain, and it is estimated that it will take from 10 to 12 years to do this work. The railroad will probably be built by private parties.

Mr. Lewis expresses the opinion that this enterprise may induce other industries in Craig county, resulting in the development of the mineral and agricultural resources of the section.

EXTENSION TO KNOXVILLE.

Mr. Candler Says Survey Is Completed for His Road and Work Expected to Start Soon.

Asa G. Candler, Atlanta, Ga., who, in addition to his other important business connections, is a director in the Greenville & Knoxville Railroad Co., telegraphs the MANUFACTURERS RECORD that survey is completed for the contemplated extension through the Blue Ridge to Knoxville, Tenn., and it is hoped to commence work on the line at an early date.

The railroad at present is 23 miles long from Greenville northwest to River Falls, S. C., and it will require an extension of about 100 miles to reach Sevierville, Tenn., where connection can be made with the Knoxville, Sevierville & Eastern Railway, which W. J. Oliver and others

built several years ago, and which, according to reports from time to time, propose to extend eastward into North Carolina. It does not yet appear whether this road will build to meet the Greenville & Knoxville or the latter will build the entire amount of track necessary to connect the two lines. The extension from River Falls seems to be headed in the direction of Hendersonville, N. C., although it has been said that it would be to Brevard, N. C. A recent press report from Spartanburg, S. C., estimated the cost of the projected extension at \$20,000,000. On account of the nature of the country through which the line will run, it will be impossible to have a very direct route, there being mountains for practically the whole distance. The territory is rich in natural resources.

The directors of the Greenville & Knoxville Railroad are W. H. Patterson, president; John S. Owens, vice-president; A. G. Candler, Jr., secretary, and Asa G. Candler all of Atlanta, Ga., and O. K. Mauldin of Greenville, S. C.

MAY BUILD TO ATLANTA.

Duke Electric Roads Development Indicates Probability of Such an Extension.

W. S. Lee of Charlotte, N. C., vice-president of the Southern Power Co., and also of the Piedmont Northern Lines, the new electric railway from Charlotte to Gastonia, N. C., and also from Anderson and Belton to Greenville and Greenwood, S. C., is reported as saying, in the course of an address at Anderson, that if the people there and along a route from there to Atlanta, Ga., would show his company that the construction of an electric railway there would be a financial proposition, in all probability the interests which he represented would build it. A route was suggested of about 125 miles via Hartwell, Ga.

It is interesting in this connection to note a report that the Southern Power Co. has recently contracted to purchase current from the Tallulah Falls plant of the Georgia Railway & Power Co., this service to begin September 1 next. A transmission line will be constructed from Easley, S. C., via Liberty and Central, S. C., to the plant.

It has for some time been expected that the eyes of the Duke syndicate, which is behind the Piedmont Northern Lines, would be turned toward Atlanta, for the idea of an interurban electric railway to connect important Georgia and Carolina points is not new. A company was organized several years ago to build from Atlanta to Augusta, and thence into South Carolina, but the construction work did not progress very far. The Piedmont & Northern Lines (known in South Carolina as the Greenville, Spartanburg & Anderson Railway) is now pushing work on the link between Greenville and Spartanburg, and it is expected that when that is finished connection will be established between the North Carolina and the South Carolina divisions by constructing the necessary link from Spartanburg to Gastonia. A further extension in the other direction from Anderson to Atlanta would seem to be only a natural development of the enterprise.

SANTA FE WORK \$1,500,000.

All That on the System's Lines in Texas, Besides Another Million There.

The Gulf, Colorado & Santa Fe Railway Co., according to a report from Galveston, Tex., where its headquarters are situated, will spend this year \$1,500,000 for improvements in that State. F. G. Pettibone, vice-president, is quoted as an-

nouncing the annual budget, including itemized expenditures, for the following purposes:

Shops, engine-houses and turntables, \$260,000; sidings and spur tracks, \$230,000; water and fuel stations, \$160,000; terminal yards, \$140,000; station buildings and fixtures, \$125,000; track fastenings and appurtenances, \$115,000; increased weight of rail, \$80,000; right of way and station grounds, \$50,000; bridges, trestles and culverts, \$50,000; additional main tracks, \$40,000; block and other signal apparatus, \$38,000; telegraph and telephone lines, \$28,000; shop machinery and tools, \$26,000; protection of banks and drainage, \$25,000; dock and wharf properties, \$21,000; fencing right of way, \$20,000; ballasting, \$20,000; improved frogs and switches, \$5,000; interlocking plants, \$15,000; miscellaneous additions and betterments, \$30,000.

This does not include the new yards and other facilities at Brownwood, to cost about \$500,000, nor the Galveston station and office building, which will amount to another \$500,000. The company has also ordered 20 locomotives of various types.

RUMORED RAILROAD DEAL.

Yazoo & Mississippi Valley Line Would Be Valuable to Frisco System.

A report which has been circulated for several weeks without confirmation is again repeated from New York to the effect that the St. Louis & San Francisco Railroad Co. may obtain the Yazoo & Mississippi Valley Railroad from the Illinois Central system. In its latest form the report says that a sale of the line to the Frisco interests is being negotiated.

The Yazoo & Mississippi Valley Railroad extends from Memphis to New Orleans, the line following in a general way the Mississippi River via Vicksburg, Miss., and Baton Rouge, La. It has several branches between it and the main line of the Illinois Central to New Orleans, which latter extends via Jackson. Connections between the two lines are made at Grenada, Durant and Jackson, Miss., and Hammond, La.

The Yazoo & Mississippi Valley line would be of particular value to the Frisco system by giving it an independent route from Memphis to New Orleans, which latter point it now enters via the New Orleans, Mobile & Chicago Railroad and the New Orleans & Northeastern, as well as over its Texas and Mexican division from the West and Southwest.

BRINSON'S ROAD PROGRESS.

New Men in the Property—Further Extension of Line Contemplated.

A report from Savannah, Ga., says that John H. Hunter and others have purchased an interest in the Brinson Railway, which extends from Savannah to Springfield, Sylvania and Waynesboro, Ga., 96 miles, and which is building an extension of 12 miles to St. Clair, Ga., where it will connect with the Georgia & Florida Railway, in which John Skelton Williams of Richmond and associates are interested.

It is further stated that at a meeting of the directors of the Brinson Railway the position of chairman of the board was created, and James Imbrie, of Wm. Morris Imbrie & Co., 45 Broadway, New York, was elected to the place. Mr. Hunter was elected vice-president and L. W. Tucker general manager, the latter also a new position. George M. Brinson of Springfield, Ga., who planned and built the road, is president. It is said that the Savannah terminals of the line will

be improved to meet the demands of increasing traffic, and also that the general offices of the road will be moved from Springfield to Savannah. Mr. Tucker has recently been associated with Westinghouse, Church, Kerr & Co. in their contract to build the extension. This additional new line is expected to be in use by February 15.

It is said that plans are being formed to further extend the line beyond St. Clair.

Georgia & Florida Railway.

R. Lancaster Williams of Baltimore has been elected president of the Georgia & Florida Railroad to succeed his brother, John Skelton Williams of Richmond, who has accepted the presidency of the Richmond Trust & Savings Co. The retiring president continues, however, to fill the position of chairman of the board of the railroad company. Bruce W. Duer of Baltimore was elected vice-president in charge of operation, and will, it is announced, remove to Augusta, Ga., to assume the duties of the position. He was formerly a superintendent of important divisions of the Baltimore & Ohio Railroad, with headquarters at Pittsburgh. He is now connected with the banking-house of Middelndorf, Williams & Co. of Baltimore. C. T. Earnest was elected secretary-treasurer, taking the places of Rutherford Fleet and C. T. Williams, respectively secretary and treasurer of the road. There were no other official changes.

It is understood that the company will make traffic arrangements with the Brinson Railroad to Savannah, as the latter is now rapidly completing an extension to St. Clair, where connection with the Georgia & Florida will be made. It is further stated that connection will also be made with the proposed Carolina-Georgia Railway, of which James U. Jackson of Augusta is president, through the Augusta-Aiken electric railway, with which the new line will connect at Aiken.

Missouri & North Arkansas.

A report from St. Louis says that information obtained at the office of John Scullin, president of the Missouri & North Arkansas Railroad Co., is that about \$1,000,000 is being spent for improvements under the receivership. The court has authorized the expenditure of \$100,000 for new shops at Harrison, Ark.; \$7500 for a station at Leslie, Ark.; \$10,000 for temporary shops at Eureka Springs, Ark., and \$7000 for tunnel work near there. About \$350,000 is to be spent for improvements to the track, including new ties and reballasting; also the replacement of wooden bridges with concrete and steel.

From the Southern half of the road in Arkansas about 20 industrial spurs have been built, principally in the lumbering regions. Joint freight terminals will be operated at Helena, Ark., in connection with the Yazoo & Mississippi Valley Railroad of the Illinois Central system. On these the Missouri & North Arkansas will spend about \$50,000. A \$3000 passenger station will be erected at West Helena.

New equipment ordered for the road includes 3 freight locomotives, 175 box cars, 50 furniture cars, 150 flat cars, 25 convertible coal cars, 3 observation buffet sleeping cars, 4 new passenger coaches and 2 gasoline motor cars, the latter being already in service.

New Equipment, Rails, Etc.

Seaboard Air Line is reported in the market for two Pacific type locomotives. Illinois Central Railroad is reported to

have ordered 1000 gondola cars from the Pullman Company, Chicago.

Pennsylvania Railroad, it is reported, will build 90 locomotives in its Altoona shops, beginning next month.

Southern Railway is reported to have ordered 200 box cars from the American Car & Foundry Co., St. Louis.

Louisville Railway is reported to have ordered 500 tons of girder rails from the Pennsylvania Steel Co., Steelton, Pa.

Atlanta, Birmingham & Atlantic Railway, according to a report, is contemplating purchase of five locomotives.

Louisville & Nashville, says a market report, has ordered 1600 tons of bridge steel from the Louisville Bridge & Iron Co.

Chicago, Rock Island & Pacific Railways, says a report, has ordered 25 Mikado locomotives from the Baldwin Works, Philadelphia.

Norfolk & Western Railway has let contracts for new equipment thus: 40 Mallet articulated compound locomotives, with 22 and 35 by 32-inch cylinders, to the American Locomotive Co., Richmond, Va.; 1000 all-steel hopper cars of 57½ tons capacity to the Pressed Steel Car Co., McKees Rocks, Pa.; 1000 all-steel hopper cars of equal capacity to the American Car & Foundry Co., Huntington, W. Va.; also 250 all-steel flat cars of 50 tons capacity to the same plant at Huntington.

A North Carolina Project.

James H. Pou, lawyer, 210 and 211 Tucker Building, Raleigh, N. C., says that at present he cannot give plans of the Raleigh, Western & Atlantic Railroad Co. excepting that application will be made to the present General Assembly of North Carolina for a charter, which will doubtless be granted. The company will probably not be organized for six months. The charter is elastic, and can be used for almost any transportation purpose, but the prime object in mind is to build a line connecting the Atlantic Coast Line Railroad and the Norfolk & Western via Raleigh. These railroads are only 52 miles apart, with Raleigh halfway between. The people of the section to be traversed greatly desire better facilities to reach both the roads.

FOREIGN NEEDS

Want Sawmill.

Morris Lewin & Bro., Jaffa, Palestine, Asiatic Turkey, write to the MANUFACTURERS RECORD as follows:

"We request you to inform us as to a manufacturer of sawmills, as there is a colony here that has eucalyptus trees and intends to place a sawmill. It would not have to be any extra large, but something dependable. We would want good illustrations, prices and also what the freight would amount to. The manufacturer would, of course, have to, after submitting all information to us, not accept orders for the line from the party we would propose it to. And then may care to place the order direct. The proper information may lead to results."

Printing Plant Equipment.

Imperial Publishing Co. (Khosla Bros.), Lahore, India, writes to the MANUFACTURERS RECORD:

"We want up-to-date printing, book-binding and litho machinery, press and cutting machines and up-to-date job and book printing types for a printing press, and shall feel much obliged if you will please put the manufacturers in communication with us."

MINING

Stonega Improvements to Cost \$200,000.

A dispatch from Bristol states that A. H. Reeder, manager of the Stonega (Va.) Coke & Coal Co., announces "that his company, in order to meet urgent demands, has planned to spend immediately \$200,000 for improvements in the company's mining operations in Wise county. These improvements will include a 50 per cent. increase at the power plant of the Imboden operations, a 100 per cent. increase at the Osaka plant, 37 new houses at Imboden and a lodge hall, 45 new houses at Roda, 20 new houses and a lodge hall at Osaka and 59 new houses and a lodge hall at the Arno plant. The company has also purchased 525 new mine cars of modern pattern and 16 electric mine locomotives.

"The Interstate Railway, which accommodates the Stonega company, is also increasing its equipment, having appropriated \$500,000 for 500 50-ton capacity steel coal cars and other rolling stock."

Sloss Improvements Costing \$325,000

The Sloss-Sheffield Steel & Iron Co.'s vice-president, J. C. Maben, Jr., of Birmingham, wires the MANUFACTURERS RECORD confirming an announcement of extensive improvements to be undertaken by the company at its coal and iron mining developments in the Birmingham district. These betterments are to cost approximately \$325,000, and are detailed as follows: Three and a half miles of railroad at Russellville and two washers there, costing \$125,000; washers at Flat-Top and Brookside and some additional improvements, costing \$110,000; additional machinery at various operations, \$15,000; three triples at Brookside, including two new ones for two new slope openings, \$25,000 new fan at Flat-Top, capable of furnishing 200,000 cubic feet of fresh air per minute, \$15,000; improvements to houses, including new houses at Bessie mines, \$20,000; electric plant at Sloss ore mines, \$15,000.

Consolidation Coal Co.

The Consolidation Coal Co., Baltimore and Fairmont, W. Va., has formally authorized the sale of the \$6,500,000 10-year collateral convertible 6 per cent. notes it has been negotiating, the purchaser being a New York syndicate. It is planned to expend most of the amount named to continue and extend developments in Kentucky, where the company has built Jenkins and other towns, and to enlarge the Miller's Creek field operations in West Virginia, enabling the present annual output to be increased to 4,000,000 tons of coal. This company's big Kentucky developments, involving 100,000 acres and an expenditure of millions of dollars, have previously been fully detailed by the MANUFACTURERS RECORD.

Francois Company Developments.

A daily tonnage of 1000 is proposed by the Francois Coal & Coke Co., which will develop 250 acres and possibly another 250 acres coal land in West Virginia. The company incorporated last week with a capitalization of \$100,000, and has organized with the following officers: President, J. M. Francois; secretary, E. J. Francois; manager, C. E. Gocke, all of Clarksburg, W. Va. Mr. Gocke is also the engineer in charge, and will open mining machinery bids in 30 days, electrical equipment to be used. Coke ovens will be built, but the number has not been determined.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

Bel-Vi-Dere Mills.

The Bel-Vi-Dere Mills, Lexington, N. C., will erect a one and two-story 666x132-foot building, of mill construction, costing about \$125,000, for its plant. In this structure will be installed 25,000 spindles and 680 forty-inch looms, driven by 1500 electrical horse-power, for the production of cotton cloth which the B. V. D. Company of New York will use for manufacturing its underwear. Plans and specifications are being prepared by the engineer-architect in charge, J. E. Sirrine of Greenville, S. C., but the date of opening building bids has not been determined. This Bel-Vi-Dere company's plans for organization, building mill, etc., were recently detailed by the MANUFACTURERS RECORD, George W. Montcastle of Lexington and Erlanger Bros. of New York, owners of the B. V. D. Company, being the owners. Future plans contemplate increasing to 40,000 spindles and with 1000 looms and later building a 40,000-spindle and 1000-loom plant, an initial investment of \$500,000, to be ultimately increased to \$2,000,000.

Supplementary Steam Plant.

The John P. King Manufacturing Co., Augusta, Ga., has completed its supplementary steam power plant building, and is installing the necessary machinery, including a 1000 horse-power Hamilton-Corliss engine and accompanying boilers. This power plant will be used when the water-power is unavailable. Its cost will approximate \$60,000. The King plant operates 60,384 spindles and 1820 looms on cloth production.

To Double Capacity.

The Caswell Cotton Mills, Kingston, N. C., write to the MANUFACTURERS RECORD as follows:

"We will double capacity, which is now 5472 spindles, increasing to 11,000 spindles, and will build an addition to present building, which is two stories high, of 100 feet to accommodate the new machinery."

Textile Notes.

J. W. Kaneer of Lilesville, N. C., plans the organization of a 250,000 company to build a cotton mill.

John B. Marshall, Greenville, S. C., is planning the organization of a company to build a mill for manufacturing cotton waste goods.

George Singleton of the Singleton Silk Manufacturing Co., Dover, N. J., is reported as planning to establish a silk mill at Charlotte, S. C.

The Riverdale Cotton Mills, West Point, Ga., writes to the MANUFACTURERS RECORD: "We are installing six H. & B. American Machine Co. speeders, one condenser and a bale opener."

At the monthly meeting in New York February 11 of the American Society of Mechanical Engineers Mr. William T. Donnelly will read a paper on port facilities for ships and cargoes in the United States.

MECHANICAL

The Multiple Show Window Device.

The application of a simple mechanical device to improve the ordinary conditions under which show windows are used has been developed, and the device, manufactured by the Newman Manufacturing Co., 717-19 Sycamore street, Cincinnati, O., and it is shown in the accompanying illustration. It is known as the Multiple Show Window, and it may be used to display goods of any description.

Only one compartment is in view from the street at a time, and the three compartments, as shown, may be slowly moved up and down or the device may be stopped at any point desired. By its use an untrimmed window will never be seen, since one compartment may be on exhibi-

may be performed by local joiners and the hoisting machine fitted, or the Newman Manufacturing Co. will undertake to make the complete installation.

A New "Cisco" Engine Lathe.

The accompanying illustration shows the new 16-inch "Cisco" engine lathe manufactured by the Cincinnati Iron & Steel Co. of Cincinnati, O. Many of the features are pointed out in the notations on the illustration. Among the important claims for this lathe are strength and durability, combined with accuracy and simplicity. Only two levers are required for the changes in feed or threads which are made without changing the gears. A safety device is provided between the feeds and lead screw to prevent engaging more than one at a time. The apron is of the double-plate type, with a

the apron. When the screw is disengaged, half nuts are automatically locked, eliminating accidental engaging. The cross-feed and top slide screws are provided with micrometer graduations, and the swivel slide is graduated on each side. The countershaft is of the double friction type, with self-oiling journals. The reverse plate and all gears are of steel, and gears hardened where necessary.

Principal dimensions of the lathe are: Length of headstock base, 26 inches; length of tailstock base, 12½ inches;

poles insure proper commutation at all loads within its capacity.

With the liberal speed adjustment of the motor, in combination with the gear changing device, operated by means of the levers shown at the left hand of the tool, the wide adjustments needed in turning up projectiles are made readily available.

To Render Cyanamid Non-Dusting.

A patent entitled "Processes of Rendering Calcium Cyanamid Non-dusting" has been issued to Frank S. Washburn of



THE MULTIPLE SHOW WINDOW.

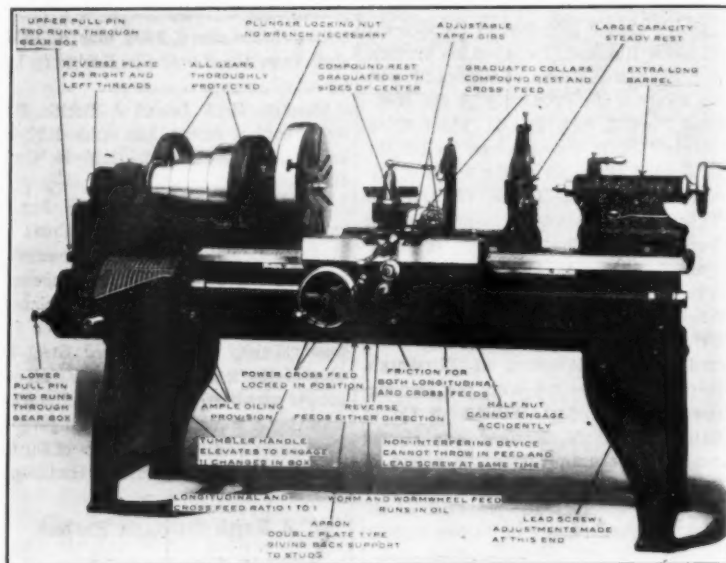
tion while the others are being trimmed from the rear.

To install the device an opening is cut in the floor nearly the size of the display window platform space and an unobstructed range of about 8 feet beneath the floor obtained. The ceiling should be about 14 feet above the floor, in order to take in three windows, each 4 feet high. With a low ceiling, two compartments may be used.

The completed structure works automatically, and is operated by city water pressure at a very low cost. The multiple show window, trimmed and in actual operation, may be seen in company's showroom, 101-3 Fourth avenue, New York, where it is stated to be attracting much favorable attention from visiting merchants and others. The cabinet work

back support, and the feeds are obtained by means of a multiple pitched steel worm and bronze worm wheel running in oil, thus insuring smooth feeding.

All parts are interchangeable, and can be duplicated by means of a complete equipment of jigs, tools and gauges. Only two wrenches are required on the lathe. The gears are all covered. The headstock is massive and thoroughly ribbed throughout, and with long housings. The bearings in the head are of phosphor-bronze, and the spindle is of carbon spindle steel. The carriage is heavy, with long bearings on the ways and wide bridge. All carriages are jig drilled on the back, so that taper attachment may be applied at any time. Both longitudinal and cross feeds are independent, but are obtained through the same friction and can be reversed in



NEW 16-INCH "CISCO" ENGINE LATHE.

travel of tailstock spindle 7½ inches; length of carriage, 23¾ inches; diameter of large face plate, 17 inches; diameter of small plate, 9 inches; countershaft pulleys, 12x3¾ inches; size of cutting tools, maximum 1¼x¾ inches; the swing-over Vs, 17¾ inches; the swing-over carriage, 11¾ inches; distance between centers, 37 inches; diameter of hole in spindle suitable for 1½-inch stock and diameter of the largest step on head cone is 12 inches, smallest step 5¼ inches.

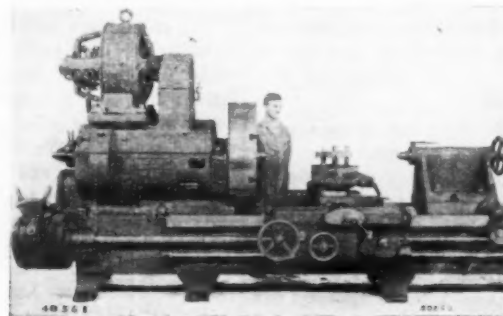
Lathe for Turning Projectiles.

The accompanying illustration shows a motor-driven lathe manufactured by the Niles-Bement-Pond Company of Plainfield, N. J., driven by a Westinghouse 20-horsepower machine-tool motor, running at 400 to 1300 revolutions a minute. This lathe is manufactured particularly for use in turning projectiles and similar work.

This service requires rigidity of equipment and a wide range of speeds, a very

Nashville, president of the American Cyanamid Co., who writes to the MANUFACTURERS RECORD as follows:

"The object is to relieve the commercial fertilizer product generally designated as 'lime-nitrogen' or 'cyanamid' from two objectionable features which have characterized it in the past, namely, its dustiness, which is annoying and otherwise objectionable to workmen who have to handle the material, and secondly, to reduce its chemical activity so that in the addition of large quantities as a component of acid fertilizer mixtures the rise in sensible temperature will not be sufficient to bring about any undesirable secondary effects, such as rendering a portion of the available acid phosphate insoluble. The extreme dustiness of ordinary lime-nitrogen or cyanamid results chiefly from the chemical separation of the free lime in the nitrifying ovens, and therefore is not susceptible of being remedied in a direct process of manufacture. It must



WESTINGHOUSE MOTOR AND POND LATHE.

high spindle speed being necessary in finishing the point of the projectile. The lathe is especially designed for individual motor drive, the motor being placed on the lathe head, thus saving floor space and eliminating danger of injury to employees in coming in contact with the motor or gears, and the motor itself is protected from injury.

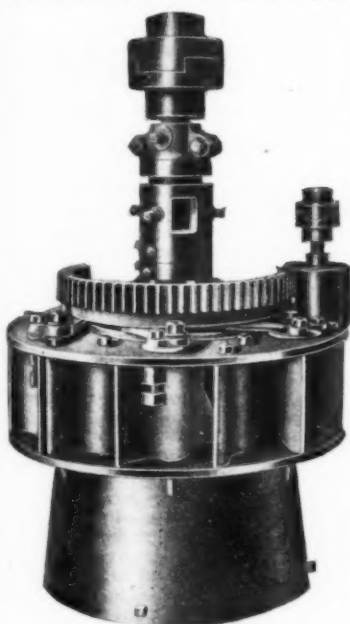
The control handle is at the extreme right of the tool apron in a convenient position for the operator. Commutating

be the result of the application of an additional process. The chemical activity of the ordinary product is also chiefly due to the finely subdivided condition of the material which exposes a relatively enormous area, and in the quick reaction thus made possible there is not time for a dissipation of the heat due to such reaction. The invention is being commercially applied by the American Cyanamid Co. The dusty material is briquetted, the briquettes having a minimum dimension of 1½

inches, made under a relatively high pressure of 4000 to 5000 pounds to a square inch. These briquettes, after seasoning, are passed through a granulating and sizing plant until the final product is a mass of distinct granules of strong texture, with sizes varying from 15 mesh to 50 mesh. Neither water nor soil solubility is lessened by granulation, as has been shown by tests undertaken for the purpose of determining such effects, and the reasonableness of these results is suggested by the extremely porous condition of the granules which is readily observed by the use of a magnifying glass."

Shelton's "Ajax" Turbine.

A water-power wheel and turbine gate which has been designed for simplicity, strength and durability, possessing the advantages of a pivot gate and at the same time eliminating undesirable features, is constructed by the Salem Foundry and Machine Works of Salem, Va., and is known as Shelton's Patent "Ajax" Turbine Water-wheel. One of the accompanying illustrations shows the turbine complete, ready to be set in the penstock. The upper and lower castings are secured together by the stationary guides. These guides are shaped like the movable gates,



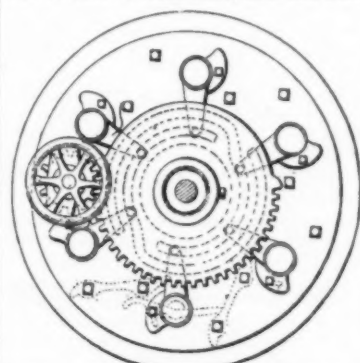
"AJAX" TURBINE COMPLETE.

and with them form the chutes to the runner or wheel proper. Between the stationary guides are pivoted the movable gates, which close against the stationary guides. They do not lap over against each other as in other types of pivot gate wheels. Only every other guide or gate is movable, but each when opened forms two chutes, thus reducing the number of movable parts. Thus in each of these wheels with 16 chutes there are only 8 movable gates. It is stated that these gates form practically water-tight joints even under the highest heads. The way in which the wheel is built with stationary guides between the upper and lower casting makes a remarkably strong construction with smooth and unobstructed water passages.

A very important feature of the "Ajax" wheel is the gate operating mechanism shown in the small illustration. The gates are not all operated at once, but in parts of two on opposite sides of the wheel. One movement of the gate pinion opens two gates fully, while others remain shut; if more power is needed, another movement of the pinion opens two more opposite gates, while the remainder stay closed, and so on until all the gates are open. Thus only a sufficient number of gates are utilized to produce the power re-

quired or to use the water supply. By this means, the proper direction and the proper proportion of area is at all times preserved and the water is delivered on a line tangent to the wheel which gives the greatest turning power.

The inner ends of the levers which project under the revolving disc are provided with upwardly extending steel pins, which fit loosely into the inner groove when the gates are closed. The operation of opening and closing the gates by means of these levers and eccentric grooves on the outer circle is apparent from the illustration. The absence of small bolts, nuts and other

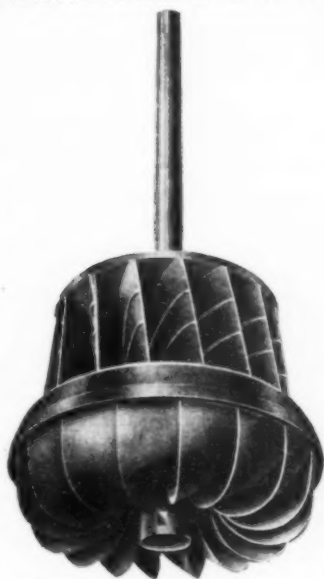


REVOLVING DISC AND ECCENTRICS.

parts renders the construction very durable.

It is stated that the "Ajax" gates move so easily under high heads that the resistance is scarcely felt at the hand-wheel, and that the gates are as responsive and as easily managed as the throttle to a steam engine, and that it is the ideal wheel for use where close regulation, easy working gates, regular speed, high efficiency in all stages of power and great power in small space is required.

Another feature of the wheel, as shown in the illustration, is found in the ribs extending across the face of the buckets. They are of sigmoidal shape, and extend in an inward and downward direction clear



WHEEL OF "AJAX" TURBINE.

across the face of the bucket. This invention overcomes the tendency of the water to crowd upward toward the top of the wheel, thereby to cause eddies in the buckets and causing the wheel to be unsteady in operation. It is stated that the speed of the wheel is considerably augmented by this construction, and these ribs also add strength to the buckets. It is believed by the designers of this wheel that it marks a new epoch in this class of machinery.

Dimension tables, directions for setting the turbine and for the construction of races and penstock, data on the flowing of water and other information is con-

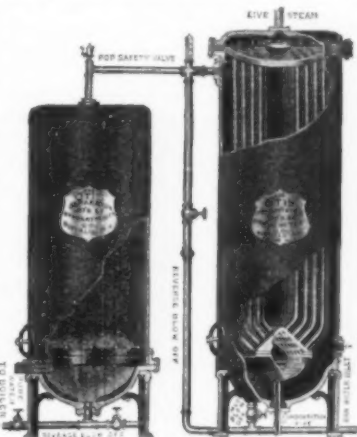
tained in the illustrated catalogue "C" just issued by the Salem Foundry and Machine Works.

Otis Feed-Water Purifiers.

The Otis feed-water purifier system, designed and manufactured by the Stewart Heater Co., Buffalo, N. Y., to prevent forming of scale of any kind on tubes and plates of steam boilers, is shown in the accompanying illustration. The equipment in this system includes a precipitator and a separator. In using it, the feed water is first heated by exhaust steam in a feed-water heater, preferably a pressure heater that will bring the temperature of the feed water up to 200 degrees Fahr.

At this stage, instead of allowing the water to go into the steam boiler with its impurities, it is passed through the precipitator. A small amount of live steam is introduced into the tubes of the precipitator in order to bring the temperature of the feed water up to 300 degrees or over before it passes into the separator.

The separator contains in its construction cast-iron perforated plates and several copper screens to hold the sediment. Three grades of emery are also used in order to effectually filter the water. The feed water, passing through this bed of emery, leaves the impurities, thus preventing them from going into the boiler. The system for this reason is guaranteed



OTIS FEED-WATER PURIFIER.

to prevent the formation of scale on the tubes and plate of a steam boiler and the equipment is shipped with that understanding. This company's equipment is illustrated and described in detail in circular "D."

High Temperature Cements.

Until within the last few years, fire-clay has been most generally used for laying up brick walls, cementing joints, patching and lining of furnaces, kilns, retorts, etc., where high temperatures are encountered.

The H. W. Johns-Manville Company, New York, has recently put on the market what is termed "J-M High Temperature Cement No. 31," which it is said can be used practically wherever working temperatures range between 1500 and 3100 degrees Fahr.

This new material is a dry powder mixture composed of asbestos and other materials. It is mixed with water to the proper consistency, about 18 to 20 pounds of water to 100 pounds of powder, for working like mortar or tamping around mounds.

When used for setting up fire-brick for boilers and furnaces, lining and roofing furnaces of various kinds, or molded into door jams, lining firedoors, repairing side walls of furnaces, making stay nut caps, etc., it has considerable mechanical strength. When air dried, it will withstand a crushing strain of 883.5 pounds

per square inch. It vitrifies at 1418 degrees Fahr., and has the high melting point of 3182 degrees Fahr.

Being semi-acid in character, it may be used with chrome bricks, silica bricks or fire-clay bricks.

It is claimed that experiments conducted with this cement show that it can be successfully used in building doors of angle iron framework without backing, or for making one-piece linings for gas or oil-burning crucible furnaces.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

JORDAN RIVER LUMBER CO.

To Develop 40,000 Acres of Mississippi Timber Land Costing \$1,000,000.

Mississippi timber land amounting to 40,000 acres has been purchased for \$1,000,000 from Edward Hines of Chicago and associates by William J. L. Engle of New Orleans. The development of the property is planned, but Mr. Engle wires the MANUFACTURERS RECORD: "Prefer to say nothing for publication."

A later report states that Mr. Engle has organized the Jordan River Lumber Co., with \$250,000 capital stock, to develop this timber land, purchased the W. W. Carre Company sawmill property at Kiln, Miss.; is rebuilding the Carre plant to increase annual output from 15,000,000 to 50,000,000 feet of lumber, and will construct a 25-mile standard-gauge railroad. Officers of the new company are as follows: President, Edward Hines of Chicago; vice-president, J. L. Dantzer of New Orleans; secretary, C. F. Wiehe of Chicago; treasurer, L. N. Dantzer of Gulfport, Miss.

McNary Lumber Co.

The McNary (La.) Lumber Co., which recently incorporated with \$500,000 capital stock and purchased timber land, acquired 28,000 acres, estimated to contain 300,000,000 feet of timber. It will build a double-band sawmill with a daily capacity of 125,000 feet of lumber, and contract for the machinery has been awarded to the Filer & Stowell Company of Milwaukee. W. M. Cady, president and general manager of the W. M. Cady Lumber Co., operating largely at McNary, is president of the new company.

Ludington Lumber Co.

The Ludington (La.) Lumber Co., which recently incorporated with \$1,500,000 capital stock and purchased mill and timber properties, acquired the Ludington, Wells & Van Schaik interests. Its purchase includes 67,000 acres of timber land, estimated to contain about 16,000 feet to the acre, mill town, logging equipment, mill, double and gang sawmill with 200,000 feet of lumber daily capacity, etc. Interests identified with the management of the Long-Bell Lumber Co. of Kansas City are interested in the new corporation.

Big Florida Timber Purchase.

M. L. Fleishel and Sam J. Carpenter, president of the Tremont & Gulf Lumber Co., all of Fullerton, La., have purchased 100,000 acres of pine timber land in the vicinity of St. Andrews Bay, Fla., for \$1,200,000. They have plans for the development of this property, but the details have not been determined, except that it is contemplated to build a manufacturing plant with a daily capacity of 200,000 feet of lumber.

Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "it is reported" or "rumored," and not as positive information. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription to the Daily Bulletin is included for the contract period.

BRIDGES, CULVERTS, VIADUCTS

Ky., Paducah.—Kentucky Southwestern Electric Railway, Light & Power Co., F. M. Smith, general manager, City National Bank Bldg., will construct steel bridge across Mayfield Creek.

Md., Baltimore.—Baltimore & Ohio Railroad Co., F. L. Stuart, chief engineer, Baltimore, advises as follows relative to recently noted viaduct at Lee St.: Cost, \$190,000; steel superstructure, paved floor, earth-filled masonry approaches; dates for opening bids not set; when ready, plans and specifications at office of chief engineer.

Mo., Louisiana.—Commercial Club, Frank W. Buffum, president, is interested in constructing bridge across Mississippi River of sufficient strength to carry trolley cars. (See "Machinery Wanted.")

Mo., Moberly.—Moberly, Huntsville & Randolph Springs Electric Railway, J. J. Munder, chief engineer, Huntsville, Mo., will build two or three small steel bridges.

N. C., Smithfield.—Johnston county will construct two iron bridges, 240 and 190 feet in length, respectively; bids received February 17 by Board of County Commissioners. (See "Machinery Wanted.")

Okla., Norman.—Kansas City Bridge Co. of Kansas City, Mo., has contract at \$38,000 to construct bridge over South Canadian River.

Tex., Corpus Christi.—C. W. Gibson, representing committee of citizens, contracted with Bartlett & Ramey, engineers, San Antonio, Tex., to prepare plans and specifications

for proposed causeway across Nueces Bay, connecting Nueces and San Patricio counties and Corpus Christi and Portland.

Va., Courtland.—Southampton County Supervisors awarded contract to Atlanta (Ga.) company at \$31,000 to construct 11 steel bridges. (Recently noted.)

Va., Norfolk.—Norfolk & Western Railway, C. S. Churchill, chief engineer, Roanoke, Va., will, it is reported, replace light by heavier bridges in Virginia and West Virginia.

Va., Rawlins.—Brunswick county will erect bridge across Waqua Creek, two miles from Rawlins; one standard 80-foot span, with 12-foot roadway; plans and specification with Clerk of Circuit Court, Lawrenceville, Va.; bids received at 12 noon February 11; blueprints of plans with Childrey-Sunday Company, Richmond, Va.; P. St. J. Wilson, State Highway Commissioner, Richmond. (See "Machinery Wanted.")

West Virginia.—Tri-State Lumber Co., J. H. Rush, vice-president, Uniontown, Pa., will construct trestle about 125 feet long by 30 feet high in Johns Creek Valley.

CANNING AND PACKING PLANTS

Ala., Summerdale.—John C. Cudahy of Chicago, Ill., will, it is reported, establish cannery. (See "Land Development.")

Ark., Pine Bluff.—Arkansas Packing Co., William Cargill, general manager, advises that plans and specifications for erection of previously-noted plant are complete and in office of secretary, Room 603, Citizens' Bank

Bldg., where proposals will be received February 22.

Ark., Russellville.—J. Green Nordin and H. Frank Smith will build cannery; purchased machinery.

Ga., Adel.—Mutual Canning Co. (E. M. Benson and associates) will establish re-

CLAYWORKING PLANTS

Ky., Louisville.—Bricks.—Bannon Brick Co. will install machinery, replacing equipment destroyed by fire, installing drier.

Mo., Harvill.—Bricks and Tile.—Frank Kitzredge will install brick and tile plant.

Mo., Kansas City.—Terra-Cotta.—National Terra-Cotta Co., capital stock \$150,000, incorporated by Andrew F. Brooker, B. A. Green and Richard P. Edwards.

Tex., Rosenberg.—Brick and Tile.—Rosenberg Brick & Tile Co., 316 Southern Pacific Bldg., Houston, Tex., chartered, \$100,000 capital stock, to manufacture brick and building tile. (See "Machinery Wanted.")

Tex., San Antonio.—Sewer Pipe.—San Antonio Sewer Pipe Co. increased capital stock from \$70,000 to \$150,000.

Tex., Milano.—Bricks and Pottery.—G. W. Buer will establish plant to manufacture bricks and pottery.

Tex., Slaton.—Bricks.—D. Odem is reported interested in establishment of brick plant.

COAL MINES AND COKE OVENS

Ala., Tuscaloosa.—Castellano & Dean Realty Co. of Jacksonville, Fla., purchased 350 acres coal land about 12 miles from Tuscaloosa and will develop.

Ky., Allen.—Mayo-Hampton Timber, Coal & Land Co., capital stock \$25,000, incorporated by B. M. Craft and others. (See "Lumber Manufacturing.")

Ala., Brookwood.—J. C. Mabey, Jr., vice-president of Sloss-Sheffield Steel & Iron Co., Birmingham, Ala., wires Manufacturers Record, confirming report his company will undertake following \$325,000 improvements: "Construct 3½ miles railroad and two washers at Russellville, \$125,000; build washers and make improvements at Flat Top and

Riggs Bros. of Wheeling to build coal tippie at Glendale.

W. Va., Independence.—Lyman & Reed of Philadelphia, Pa., will build coaling plant and develop coal mines; propose incorporating company.

W. Va., Clarksburg.—Francois Coal & Coke Co. (recently noted incorporated, \$100,000 capital stock) states will develop 250 acres, with possibly 250 additional; estimated capacity, 1000 tons daily; will build coke ovens; number not determined; open bids in 30 days for electrically-operated machinery; J. M. Francois, president; E. J. Francois, secretary; V. E. Gocke, manager and engineer. (See "Machinery Wanted.")

CONCRETE AND CEMENT PLANTS

Ky., Glendale.—Concrete Bricks, etc.—Glendale Lumber Co. will install equipment to manufacture concrete bricks, blocks, window sills, etc.; machinery purchased.

COTTON COMPRESSES AND GINS

S. C., Bradley.—Bradley Manufacturing Co., T. H. Patterson, Prosperity, S. C., to be president, will operate cotton gin; install machinery. (See "Cottonseed-oil Mills.")

Tex., Cooper.—Cooper Board of Trade, R. D. Sterne, secretary, is interested in locating cotton compress. (See "Machinery Wanted.")

Tex., Houston.—Shippers' Compress Co. organized with J. M. Dorrance president, John W. Sanders vice-president, K. E. Womack secretary-treasurer; will erect cotton sheds; machinery contracts closed. (Recently noted incorporated with \$100,000 capital stock.)

Tex., Port Aransas.—J. M. Felder and H. F. Underwood will build \$60,000 cotton compress; organize Port Aransas Compress Co.

Tex., Velasco.—S. H. Hudgins and associates are considering establishment of two or four-stand cotton gin, cold press oilcake plant, ice factory and electric-light plant.

COTTONSEED-OIL MILLS

Ala., Clanton.—W. J. Mullins and L. H. Reynolds of Clanton and Ben F. Barber of Birmingham, Ala., will build cottonseed-oil mill.

Okla., Marietta.—Marietta Cotton Oil Co., capital stock \$10,000, incorporated by W. L. Hagan and others.

S. C., Bradley.—Bradley Manufacturing Co., T. H. Patterson of Prosperity, S. C., to be president, incorporated, \$15,000 capital stock, to gin cotton and operate oil mill; purchased oil mill at Bradley; will buy new oil mill and gin machinery; officers not yet elected.

S. C., Cheraw.—Cheraw Cotton Oil Co. (recently noted incorporated, \$50,000 capital stock) contemplates erection of three-press oil mill with daily capacity of 60 tons; plans not yet drawn; M. B. Crigler to be active manager.

Tex., Angleton.—Angleton Cotton Gin Co. will install cold cottonseed-oil press.

Tex., Denison.—Industrial Cotton Oil Co. awarded contract at \$15,000 to John Brownbridge of Denison to erect main building for cottonseed-oil mill, replacing plant previously reported burned; pressed-brick construction; cost of machinery about \$50,000.

Tex., Fort Worth.—Riverside Cotton Oil Co., capital \$50,000, incorporated by W. J. Hedley, Ben O. Smith and W. A. Hauger.

DRAINAGE AND IRRIGATION

Miss., Crenshaw.—Commissioners of Drainage District No. 2 of Tunica, Quitman and Panola counties, Miss., will construct 14,438 cubic yards of embankment and 61,614 cubic yards excavation; bids received until February 18; Morgan Engineering Co., 608 Goodwyn Institute Bldg., Memphis, Tenn., engineer. (See "Machinery Wanted.")

Miss., Marks.—Yazoo-Coldwater Drainage District organized to construct drainage system; plan calls for complete diversion of Coldwater River into Horn Lake; main canal to be 15 miles long; district embraces about 350,000 acres land in portions of Tunica, De Soto, Panola, Tate, Quitman and Coahoma counties; Morgan Engineering Co., 610 Goodwyn Institute Bldg., Memphis, Tenn., wires Manufacturers Record: "Commissioners are H. W. Crenshaw of Crenshaw, Miss.; Lee Lesser of Tunica, Miss., and M. R. Cox of Marks, Miss.; probable cost, \$3,000,000; Commissioners will receive bids for preliminary bond issue."

PROPOSAL ADVERTISEMENTS

IN THIS ISSUE ARE

PUBLISHED ON PAGE 92 and 93

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cently-noted cannery; officers not elected; erect two-story 25x50-foot building and 20x40-foot boiler-room at cost of \$1000; buildings of corrugated-iron, with cement floor; open bids February 15 on steam canning and preserving machinery, estimated cost \$2000; can sweet potatoes, tomatoes and syrup; capacity, 20,000 daily. (See "Machinery Wanted.")

Ga., Atlanta.—Swift Packing Co. will improve plant at 72 E. Alabama St.; cost \$3600.

Md., Bozman.—Robert Harrison and Martin Jarboe of Sherwood, Md., will establish cannery.

Md., Crisfield.—American Seafood Co., capital stock \$500,000, organized to consolidate various companies handling soft-shell crabs; will have branch houses on Smiths and Deals Islands and several houses in Crisfield and vicinity; W. L. Gibson is president; C. A. Lockerman, vice-president; J. Edward Woodland, secretary; W. E. Gibson, treasurer.

Md., Queen Anne.—George C. Moore, C. H. Dean, H. L. Jump and others will establish cannery. Mr. Dean will probably be president and Mr. Jump secretary-treasurer.

Md., Trappe.—Landing Neck Canning Co. recently noted incorporated with \$3000 capital stock at Easton, Md.) awarded contract to Charles Jones, Trappe, to erect canning plant; 40x100 feet; metal siding and roofing; cost \$1000; daily capacity 10,000 to 30,000 cans of tomatoes; now ready to receive bids on machinery. (See "Machinery Wanted.")

S. C., Chesnee.—Rufus Fike will, it is reported, establish cannery.

Va., White Stone.—Little Bay Packing Co., capital \$50,000, incorporated; T. A. Yerby, president; C. A. Saunders, vice-president; M. W. Bruce, secretary-treasurer.

Brookside, \$110,000; install additional machinery at various locations, \$15,000; erect three tipples, including two for two new slope openings, \$25,000; install fan with capacity 200,000 cubic feet air per minute at Flat Top, \$15,000; improve houses and build houses at Besse mines, \$20,000; install electrical plant at Sloss ore mines, \$15,000."

Ky., Jenkins.—Consolidation Coal Co., Fairmont, W. Va., and Baltimore, Md., authorized \$6,500,000 notes, sold to New York syndicate, to continue and add to extensive Kentucky developments (about 100,000 acres), with large portion of amount named to enlarge operations in Millers Creek field in West Virginia; plans contemplate increasing annual output to 4,000,000 tons coal.

Ky., Morgantown.—G. L. Drury, J. A. Watkins, C. E. Sullivan and J. C. Haney purchased, it is reported, West Aberdeen Coal Co.'s property and will operate.

Md., Frostburg.—Stanton George's Creek Coal Co., capital stock \$50,000, incorporated by Louis Stanton and others; will develop coal mines about three miles from Frostburg; construct railroad switch 2100 feet long.

Tenn., Chattanooga.—Paint Rock Consolidated Coal Co., capital stock \$50,000, incorporated by J. R. Barnes, H. B. Bonney, W. B. Garvin and others.

Va., Pulaski.—Pulaski Anthracite Coal Co. changed name to Pulaski Anthracite Coal Co. and increased capital stock from \$200,000 to \$425,000.

Va., Stonega.—Stonega Coal & Coke Co. appropriated \$300,000 for enlarging power plants and erecting buildings at three or four operations in Wise county with view to increasing output of mines.

W. Va., Glendale.—Hitchman Coal & Coke Co., Wheeling, W. Va., awarded contract to

ELECTRIC PLANTS

Ala., Huntsville.—City votes March 11 on proposition to sell Huntsville Electric-Light & Power Co. to Charles H. Dameron and associates.

Ark., Sulphur Springs.—City will expend \$35,000 to construct electric-light plant and water-works recently noted; erect power-house 65x35x18 feet; develop 75 horse-power at present; later will develop 200 horse-power; probably open bids in about 40 days; date not determined; J. Albert C. Moore, engineer, Independent Bldg., Joplin, Mo. (See "Machinery Wanted.")

Ark., Wynne.—City will make improvements to electric-light system; Board of Commissioners receive proposals until 1.30 P. M. February 21; R. C. Huston & Co., consulting engineers, 630 Exchange Bldg., Memphis, Tenn. (See "Water-works" and "Machinery Wanted.")

Cal., Eatonville.—City defeated \$16,000 bond issue for electric-light plant; L. M. Pennington, Mayor. (Recently noted.)

Cal., Jonesboro.—City (recently noted as having voted \$10,000 bond issue to construct light and power plant) will erect small transformer station; E. W. Hutcheson, chairman of Electrical Commission. (See "Machinery Wanted.")

Ky., Eminence.—Kentucky Utilities Co., Harry Reid, vice-president, Lexington, Ky., purchased Eminence Electric Light Co.'s plant; will improve and operate; also proposes furnishing electricity to Pleasureville and New Castle, Ky. (Recently reported contemplating establishing plant.)

Ky., Danville.—Light & Development Co. of St. Louis, Mo., purchased Danville Light, Power & Traction Co.'s plant and will operate.

Ky., Paris.—United States Utilities Co., capital stock \$10,000,000, incorporated; will acquire electric-light plants at Paris and Danville, Ky.; gas plant at Paris, Ky.; main office in St. Louis, Mo.

La., Marksville.—City is considering \$30,000 bond issue to enlarge electric-light plant and construct water-works; T. T. Fields, Mayor.

Md., Baltimore.—City contemplates installing generating plant in Polytechnic Institute; Clarence E. Stubbs, Building Inspector, City Hall, will be in charge of installation.

Mo., Essex.—Dexter Electric-Light, Heat & Power Co. of Dexter, Mo., petitioned City Council for franchise to construct electric-light plant.

Mo., Moberly.—Moberly, Huntsville & Randolph Springs Electric Railway, J. J. Munder, chief engineer, Huntsville, Mo., will build power-house.

N. C., Cherryville.—City is considering bond election to vote on \$45,000 bond issue for municipal improvements; purchase lighting plant of Kendrick Bros. and furnish street lighting, construct water-works, improve streets and erect school. Address The Mayor.

N. C., Clayton.—City will construct electric-light plant, water-works and sewer system; light plant will consist of about 5 miles of pole lines and 100-kilowatt transformer station; bids received until February 25; Gilbert C. White, engineer, Charlotte, N. C. (See "Water-works" and "Machinery Wanted.")

N. C., Hickory.—Southern Power Co., Charlotte, N. C., acquired Thornton Electric Light & Power Co., including generating plant, transmission system, etc.; will operate in connection with purchaser's various hydro-electric developments and transmissions. (Thornton property lately reported purchased by Coker, Marshall & Burkholder.)

N. C., Snow Hill.—Town will petition Legislature for authority to vote on bond issue to construct electric-light plant; estimated cost \$10,000. Address Town Clerk.

Okla., Elk City.—Elk City Ice, Fuel & Light Co. will, it is reported, install 200-kilowatt generator and generator; E. W. Merrifield, superintendent. (See "Ice and Cold-storage Plants.")

Okla., Tulsa.—Tulsa City Light, Heat & Power Co., capital stock \$300,000, incorporated by A. A. Small, A. B. Davis and G. B. Small.

S. C., Walterboro.—Walterboro Ice & Light Co., incorporated with G. C. Brown, secretary-treasurer; will build electric-light and power plant within two years. (See "Ice and Cold-storage Plants.")

Tex., Greenville.—City is having plans and specifications prepared for underground cable for municipal light plant. M. M. Arnold, City Commissioner.

Tex., Houston.—Houston Lighting & Power Co. will install two 600-horse-power boilers, on reinforced-concrete foundations, in power plant; generator to increase capacity of plant by about 5000 kilowatts; 40 horse-power electrically-operated traveling crane for handling heavy machinery, 17-kilowatt exciter, etc.; will enlarge building; machinery ordered. (Recently reported to erect addition to boiler-house costing \$17,000.)

Tex., Manor.—W. M. Allison is interested in construction of electric-light system.

Tex., Dallas.—City will vote in April on bond issue to construct electric-light plant; Leon M. Taylor, city electrician, estimates cost at \$373,390.

Tex., Elgin.—Elgin Light & Power Co., Thomas L. Delsch, president, will install engine direct connected to alternator, electrically operate feed pumps, marble switchboard, transformers, poles and miscellaneous electrical appliances.

Tex., Eastland.—Eastland Light & Power Co., A. A. Abney, manager, will rebuild electric-light plant recently noted; cost \$10,000. (See "Machinery Wanted.")

Tex., Plano.—Wilcox Light & Power Co. purchased and contemplates improving property of Plano Light & Power Co.; install transformer.

Tex., Yaleta.—Rio Grande Valley Traction Co. will build substation at West Yaleta; C. W. Kellogg, Texas manager Stone & Webster Engineering Corporation, El Paso, Tex., Boston, Mass., etc.

Va., Richmond.—Interstate Electric Corporation, capital stock \$1,000,000, incorporated; John G. Jackson, president, New York; Thos. B. Gay and H. H. Chalkley, Richmond.

Va., Roanoke.—Richardson-Wayland Electrical Corporation, capital stock \$10,000, incorporated; J. M. Richardson, president; J. E. Wayland, secretary-treasurer.

Va., Rocky Mount.—City contemplates, it is reported, \$200,000 bond issue for electric-light system, etc. Address The Mayor. (See "Road and Street Work.")

Va., Staunton.—T. G. Basinger and associates purchased Blue Ridge Light & Power Co., including electrical railway, electric-light and power plant, water rights of Virginia Power Co. at Port Republic, etc.; contemplate development, etc. Mr. Basinger writes to Manufacturers Record: "Impossible to give details at present; no plans have been made for development."

W. Va., Wheeling.—West Virginia Traction & Electric Co. plans extensive improvements to its systems; writes to Manufacturers Record: "Unable to give any definite information at this time."

Okla., Gotebo.—W. H. Kuder, Mayor, states city will not install electric-light plant at Rainey Mountain school, as recently stated.

FERTILIZER FACTORIES

Tex., Paris.—Williams Fertilizer Co., capital \$500,000, incorporated by J. S. Williams, R. L. Bennett and S. B. M. Long.

FLOUR, FEED AND MEAL MILLS

Ala., Birmingham.—O. H. Bowen, 1115 Empire Bldg., advises he contemplates organization of company to erect plant for manufacture of mixed feed. (See "Machinery Wanted.")

Ky., Bloomfield.—Bloomfield Roller Mills will install additional power equipment, including engine and boiler; cost about \$2500.

FOUNDRY AND MACHINE PLANTS

Ala., Gadsden.—Cars.—Gadsden Car Works will build addition and double capacity; present monthly capacity 600 cars.

Ga., Columbus.—Stoves, etc.—Hank's Stove & Range Co., Rome, Ga. (recently noted considering establishment of foundry in Columbus), states present lot and buildings are too small and will build new factory, but has not decided on location.

Okla., Tulsa.—Boilers, etc.—Tulsa Boiler and Sheet Iron Works awarded contract to Breunman & Rooney to erect main factory building, storage-rooms and offices; main building will be 100 feet square; steel, iron and concrete construction; entire site, 400x140 feet; estimated cost, \$50,000.

Tenn., Knoxville.—Ranges.—W. P. Biddle, 119 E. Vine St., contemplates establishing plant to manufacture steel ranges. (See "Machinery Wanted.")

Tenn., Bristol.—Stoves.—Iron City Stove Co., capital stock \$15,000, incorporated by G. L. George, W. H. Teague, J. C. George and others.

Tex., Bryan.—Brass and Iron Foundry.—William Gilbert will establish iron and brass foundry; has all machinery.

Tex., Crockett.—Cotton Chopper.—Planters' Cotton Chopper Co., W. M. McCarty Moore, president, 712 Southwestern Bldg., Dallas, Tex., awarded contract to Smith Bros. to erect 70x100-foot fireproof sheet-iron building; cost of machinery (purchased) \$5000; daily capacity 25 choppers. (Recently noted incorporated with \$100,000 capital stock, etc.)

Tex., Sherman.—Iron.—Washington Iron Works Co. will erect building; 40x110 feet; walls 16 feet high; framework of steel and hy-rib metal lath; side walls of glass; cost \$10,000; also erect garage of same material.

Tex., Wichita Falls.—Plows, etc.—K. O. Knudson, Clifton, Tex., and L. T. Lee, Gailard, Tex., contemplate organization of company with \$25,000 capital stock to establish plant to manufacture light rotary disc plow and harrow.

W. Va., Charleston.—Electrical Machinery, etc.—Electric Billboard Co., capital stock \$10,000, incorporated by F. W. Hughes, Bert Stiman, C. E. Carney and others; office at 501 Kanawha St.

GAS AND OIL ENTERPRISES

Ala., Jasper.—Pennsylvania Oil & Gas Co. increased capital stock from \$100,000 to \$200,000; will develop lease of 2000 acres in Walker county and construct pipe line to Jasper. (Details recently noted.)

Ala., Tuscaloosa.—Gas Plant.—Morris Bros. petitioned City Commissioners for franchise to construct gas plant.

Ark., Fort Smith.—W. F. Blocker, M. C. Burke and Tom Wall, all of Poteau, Okla., petitioned City Council for franchise to furnish gas.

Ky., Louisville.—Falls City Oil Co., capital stock \$100,000, incorporated by Oscar Fenley, Logan C. Murray and J. D. Stewart.

Ky., Paris.—Gas.—United States Utilities Co., capital stock \$10,000,000, incorporated; will acquire gas plant at Paris. (See "Electric Plants.")

La., New Orleans.—Union Petroleum Co. of Louisiana, capital stock \$200,000, incorporated; Charles Payne Fenner, president; Edmond Phelps, vice-president; A. C. Woodman, secretary-treasurer; offices in New Orleans and Philadelphia, Pa.

La., New Orleans.—Co-operative Oil & Mineral Co., capital stock \$250,000, incorporated; James E. Glisson, president; Raymond A. Penick, vice-president; James E. Vergnes, secretary-treasurer.

La., Vinton.—Vinton Crude Oil Co., W. H. Starks, president, Orange, Tex., secured lease on 24½ acres in Vinton oil field; will drill several wells and develop. (Recently reported incorporated with \$20,000 capital stock.)

N. C., Gastonia.—Gas.—F. H. Hicock, representing Philadelphia (Pa.) company, secured franchise for gas plant.

N. C., Lexington.—Gas Plant.—Board of Aldermen granted 99-year franchise to North Carolina Public Service Corporation to build gas plant.

Okla., Checotah.—The Oil Corporation, capital stock \$30,000, incorporated by R. J. Koch and R. B. Robinson of Checotah and Harry D. Levy of Muskogee, Okla.

Okla., Holdenville.—Indian Oil & Gas Co., capital stock \$10,000, incorporated by J. D. Boxley, O. D. Smith, J. J. Jackson and H. E. Brinson.

Okla., Muskogee.—Kauokla Oil Co., capital stock \$30,000, incorporated by John H. Mosier, I. O. Stuart, R. M. Greenslade and others.

Okla., Muskogee.—Catherine Oil Co., capital stock \$12,000, incorporated by George W. Sterling, C. M. Smith, L. W. Griffith, J. Frisman, S. J. Goddard and others.

Okla., Norman.—Norman Oil & Gas Co., capital stock \$10,000, incorporated by E. B. Johnson, S. W. Hutchin and R. C. Berry.

Okla., Oklahoma City.—Good Hope Oil Co. incorporated by A. E. King, W. H. Ware and C. R. Dean.

Okla., Okmulgee.—Butler Oil Co., capital stock \$25,000, incorporated by W. B. Weeks and J. S. Walker of Butler, Okla., and Harlan Read of Okmulgee.

Okla., Oklahoma City.—British-American Oil Co., capital stock \$2000, incorporated by A. E. Carter, J. C. Andreen and E. L. Rudell.

Okla., Oklahoma City.—Carpathia Petroleum Co., capital stock \$32,000, incorporated by George E. Black, J. M. Van Winkle and J. I. Turner.

Okla., Oklahoma City.—Senior Oil & Gas Co., capital stock \$15,000, incorporated by D.

McKinstry, G. W. Turley and S. R. Raymond.

Okla., Oklahoma City.—Choctaw Oil & Development Co., capital stock \$10,000, incorporated by W. L. Benham, Hershall D. Newman and A. J. Kean.

Okla., Tulsa.—Kelster Drilling Co., capital stock \$10,000, incorporated by F. B. Ufer, H. F. Sinclair and P. J. White.

Okla., Tulsa.—Percy Oil & Gas Co., capital stock \$30,000, incorporated by A. J. Cammeck of Shawnee, Okla.; J. W. Brown of Brownsville, Tenn., and P. A. Aden of Paris, Tenn.

Okla., Tulsa.—Tulsa Leasing & Development Co., 19½ E. 2d St. (recently noted incorporated, \$25,000 capital stock), has organized but not authorized plans; J. R. League, secretary; W. W. Bonnell, general manager.

Okla., Tulsa.—O. K. Oil Co., capital stock \$5000, incorporated by W. E. Elliott, J. W. Calkins and Ray S. Fellows.

Okla., Tulsa.—Byers Drilling Co., capital stock \$9000, incorporated by W. L. Connelly, H. F. Sinclair and P. J. White.

Okla., Tulsa.—Richards Drilling Co., capital stock \$7000, incorporated by W. L. Connelly, P. J. White and H. F. Sinclair.

S. C., Orangeburg.—Gas Plant.—Edward L. Rieha, Law Bldg., Baltimore, Md., is interested in establishment of gas plant.

Tex., Denton.—Denton Oil & Development Co., capital stock \$28,000, incorporated by Isaac Canfield, J. D. Bell and J. S. Darnall.

Tex., Ennis.—Gas Plant.—Booster Club accepted proposition of Ohio corporation to establish gas plant costing \$30,000.

Tex., Greenville.—Gas Plant.—J. R. Cullinane of St. Louis, Mo., purchased local gas plant; contemplates enlarging plant and extending distributing system.

Tex., Houston.—Hindman-Barlow-Scott Oil Co. increased capital stock \$20,000 to \$40,000.

W. Va., Huntington.—Columbia Gas & Electric Co. of Huntington, capitalized at \$63,000,000; Cincinnati Gas Transportation Co., capitalized at \$10,000,000; Union Gas & Electric Co., capitalized at \$15,000,000, and Cincinnati Gas & Electric Co., capitalized at \$35,000,000, each of Cincinnati, O., plan merger; own gas fields in West Virginia and Kentucky and gas and electric distribution systems in Cincinnati; James C. Ernest, president of Union Corporation, is reported interested in plan.

ICE AND COLD-STORAGE PLANTS

Ala., Columbiana.—Mt. Dixie Land & Sanitarium Co., J. H. Compton, president, Nannafala, Ala., will, it is reported, increase capital stock and establish ice plant.

Ark., Little Rock.—Terry Dairy Co., Will Terry, president, 1801 Scott St., let contract for refrigerating machinery, 20 tons capacity.

Ga., Thomasville.—W. J. Upchurch, A. J. Stanley, J. T. Dixon, J. R. Floyd and others will organize company with \$12,500 capital stock to establish ice plant.

Md., Raspeburg.—Raspeburg Crystal Ice Co., capital stock \$20,000, organized; Thomas B. Gatch, president; Henry Kolk, vice-president; Dr. A. L. Wilkinson, treasurer.

Md., Hyattsville.—Hyattsville Ice Co., capital stock \$40,000, incorporated by Philomen H. Tuck (207 N. Calvert St.), Thomas O. Jones and Albert E. Smith, all of Baltimore, Md.

Okla., Elk City.—Elk City Ice, Fuel & Light Co. (recently reported incorporated with \$60,000 capital stock) is consolidation of Elk City Light & Power Co. and Elk City Ice, Fuel & Light Co.; reported that E. W. Merrifield, superintendent, invites bids on 200-kilowatt generator and engine; W. E. Corn, general manager.

S. C., Florence.—Phoenix Ice Co. increased capital stock from \$40,000 to \$100,000 and will increase daily capacity of plant from 40 to 80 tons ice.

S. C., Walterboro.—Walterboro Ice & Light Co., capital stock \$12,000, incorporated; will establish ice plant with capacity 10 to 20 tons daily; ice machinery purchased; also build electric-light and power plant within two years; G. C. Brown will be secretary-treasurer and John D. Glover vice-president and manager.

Tex., Dallas.—Sulzberger & Sons Company will build cold-storage plant; two stories and basement; brick; cost \$25,000.

Tex., Garland.—Garland Ice & Manufacturing Co., capital \$25,000, incorporated by E. G. Cole, C. M. Brown, T. N. Hickman and others.

Va., Roanoke.—Roanoke Ice Corporation, capital stock \$35,000, incorporated; W. K. Andrews, president; O. S. Groggs, secretary; L. A. Scholz, vice-president.

IRON AND STEEL PLANTS

Ala., Gadsden.—Iron Furnaces, Steel Plant, etc.—Frederick H. Buss and Daniel Holman of New York, representing Eastern capital, purchased Southern Iron & Steel Co. at sale in Birmingham, for \$1,530,000, including iron furnaces, steel plant, etc.; James Bowron, Birmingham, Ala., trustee in bankruptcy of company, wires Manufacturers Record: "Sale of property confirmed; new company formed under name of Standard Steel Co.; directors: S. H. Voorhees, N. G. Higham, Harry Bronner and A. M. Wickwire, all of New York, together with James Bowron, president; H. Sanborn Smith, vice-president, and A. R. Forsythe, secretary-treasurer. Future plans not yet developed; no details can be given at present."

Va., Pulaski.—Iron Furnace.—Virginia Iron, Coal & Coke Co., Bristol, Tenn.-Va., has blown in Dora furnace, to which repairs have been made.

W. Va., Riverside.—Iron Furnace.—National Tube Co. (general office, Frick Bldg., Pittsburgh, Pa.), will about March 1 blow out Furnace B for repairs; reline furnace and two stoves.

LAND DEVELOPMENTS

Ala., Birmingham.—Charles W. Leavett, Jr., landscape engineer, 220 Broadway, New York, will arrange to award contracts for improvement of first unit of property to be developed by Milner Land Co. as residential park; contracts will aggregate \$100,000 and include grading, street paving, sidewalks, curbs, gutters and sewerage systems, both storm and sanitary. (Recently noted.)

Ala., Birmingham.—Turkey Creek Development Co., capital stock \$200, incorporated; W. G. Oliver, president; George J. Roebuck, vice-president; J. H. Shearer, secretary.

Ala., Summerville.—John C. Cudahy of Chicago, Ill., will plant fig orchard; purchased 1300 trees of Celeste variety of figs; reported to establish cannery.

Fla., Tampa.—Cotter Land & Investment Co. organized with R. S. Hall, president; Lee MacDonnell, vice-president; Claude Cotter, secretary-treasurer; capital stock \$50,000; will develop property near Tampa and in South Florida.

Ga., Pickens County.—Tate Industrial School, Samuel Tate, president, Tate, Ga., commissioned Cook & Swope, landscape architects, Atlanta Trust Bldg., Atlanta, Ga., to prepare plans for agricultural and orchard development, etc. (See "Schools.")

Ky., Ashland.—Bogges Land Co., capital \$23,000, incorporated by Thomas Bogges, Jr., V. V. Adkins and H. R. Dyeard.

Ky., Louisville.—St. Matthews Land Co., capital stock \$8000, incorporated by Henry Bauer, Alex. Staebler, Albert L. Bauer and J. H. Cahill.

La., New Orleans.—Lane & Jackson Land Co., capital stock \$50,000, incorporated; Millard C. Baker, president; De Lisle Lane, vice-president; B. M. Carson, treasurer; Wilson Jackson, secretary.

La., Shreveport.—City votes March 4 on \$50,000 bond issue to purchase additional property and for improvements at State Fair Grounds. Address The Mayor. (Date postponed from February 4, lately stated.)

La., Thibodaux.—Orange Grove Planting Co., capital stock \$61,600, organized; C. P. Shaver, president; Alfred Pecot, vice-president; E. G. Robichaux, secretary; P. L. Braud, treasurer.

Md., Baltimore.—Belmont Realty Co., capital stock \$8000, incorporated by Charles E. Ecker (401 Gaither Estate Bldg.), John C. Paterson and Frank R. Paterson.

Md., Cumberland.—B. L. J. Real Estate Co., capital stock \$25,000, incorporated; Wm. M. Bruce, president; C. Litzenberg, vice-president and treasurer; Sanford H. Buley, secretary.

Miss., Laurel.—City commissioned Cook & Swope, landscape architects, Atlanta Trust Bldg., Atlanta, Ga., to prepare plans for laying out city park (17 acres) in drives, walks, etc.

Miss., Vicksburg.—Deer Creek Cotton Estates Co. of Vicksburg, Memphis (Tenn.) and London (England) purchased more than 25,000 acres Sharkey and Issaquena counties property for \$2,000,000; purchase lies in Yazoo and Mississippi deltas, extending 17 miles along Yazoo delta, 40 square miles of territory, including various plantations, towns, dwellings, barns, etc., owned by companies and individuals; buyer will continue general developments and especially cultivate long staple cotton for shipment to English mills in which owners of Deer Creek corporation are interested; will at once or-

ganize managerial force to inaugurate extensive improvements for thorough developments.

Tex., San Antonio.—Los Angeles Heights Improvement Co., George Hagelstein, president, purchased tract for \$40,000 near city limits and will develop as suburb; also reported to purchase 200 acres adjoining Los Angeles Heights for suburban development.

Tex., Temple.—City will vote in April on \$7500 bond issue for public parks; W. E. Dozier, City Engineer.

Va., Richmond.—Glen Allen Corporation, capital stock \$200,000, incorporated; W. H. Adams, president; H. R. Pollard, Jr., treasurer, and Jesse P. Wood, secretary, Richmond, Va.; will develop 850 acres; subdivide into one and two-acre tracts.

Tex., Waco.—Waco Cemetery Association, 1803 Amicable Bldg., Eugene Early president and C. J. Glover secretary, will expend \$20,000 to \$30,000 on parking cemetery; dates for construction bids not set; acreage 58.63; D. L. Strain, manager. (Incorporated with \$100,000 capital stock and purchase of land recently noted.)

Va., Highland Park, P. O. at Richmond.—Town contemplates voting on \$75,000 bond issue to improve park and streets. Address Town Clerk. (See "Road and Street Work.")

LUMBER MANUFACTURING

Ala., Andalusia.—Horseshoe Lumber Co. purchased 2900 acres timber land in Andalusia county for \$67,410.

Ala., Reform.—Reform Planing Mill Co., capital stock \$15,000, organized with George A. Blessed, president, Reform; W. W. Bensley, vice-president, Carrollton, Ala.; W. J. Graham, treasurer, and J. B. Martin, secretary, both of Reform; will build planing mill.

Ala., Tuscaloosa County.—J. H. Baird of Nashville, Tenn.; George W. Killebrew of Mt. Pleasant, Tenn., and others of Nashville are negotiating to purchase 23,000 acres yellow pine timber land on west bank of Warrior River; report states \$750,000 is involved.

Ark., Imboden.—D. J. Landers' Lumber Co. of Springfield, Mo., will establish plant.

Ark., Satuma.—Walter E. Strong, secretary Arkansas Mill & Lumber Co., 311 Riegler Bldg., Little Rock, Ark., states as follows relative to development of 45,000,000 feet of timber land in Perry county: "Daily capacity of mill 30,000 feet of pine and oak timber; will not install new equipment." (Recently noted incorporated at Little Rock, Ark., with \$100,000 capital stock and to issue \$125,000 first mortgage timber bonds, etc.)

Ark., Wabbaseka.—Dugger-Goshorn Stave & Lumber Co. of Memphis, Tenn., purchased (for \$54,240) 3140 acres timber land in Jefferson county, and will develop; timber will supply band-saw mill now being built at Wabbaseka.

Fla., St. Andrews Bay.—M. L. Fleishel and Sam J. Carpenter, president of Tremont & Gulf Lumber Co., all of Fullerton, La., purchased 109,000 acres pine timber land in vicinity of St. Andrews Bay for \$1,200,000; have plans for development, but details not determined; contemplate building plant with daily capacity 200,000 feet lumber.

Ga., Metcalf.—Upnago Lumber Co., Thomasville, Ga., purchased timber land estimated to produce 40,000,000 feet of lumber; will build plant and develop tract; construct tram road, about 15 miles long, from Metcalf through main body of timber.

Ga., Moultrie.—Moultrie Sawmill Co. (recently noted incorporated, \$5000 capital stock), states will not manufacture; will conduct contract lumber business; F. L. Bradshaw, Pavo, Ga., president; L. E. Morgan, secretary.

Ky., Allen.—Mayo-Hampton Timber, Coal & Land Co., capital \$25,000, incorporated by B. M. Craft, John M. Allen and C. C. Craft.

Ky., Pineville.—Straight Creek Lumber Co., capital \$10,000, incorporated by H. C. Card, A. H. Hamlin and A. C. Patterson.

Ky., Owensboro.—Anglo-American Mill Co. increased capital stock from \$100,000 to \$200,000.

La., Baskin.—West Virginia Timber Co., Charleston National Bank Bldg., Charleston, W. Va., purchased Kesterson timber tract containing 22,000 acres of land; also purchased double band mill with equipment and will operate; will cut timber and probably subdivide into plantations for cotton growing. (Recently noted.)

La., Benton.—Dubach Lumber Co. of Dubach, La., will, it is reported, build sawmill.

La., Ludington.—Ludington Lumber Co.'s

purchase includes 67,000 acres timber land, sawmill equipped with two double band and one gang saw for daily capacity 200,000 feet lumber, logging equipment, mill town, etc. (Recently reported incorporated with \$1,500,000 capital stock and purchasing Ludington, Wells & Van Schaik properties.)

La., McNary.—McNary Lumber Co. purchased 28,000 acres long-leaf pine timber land, estimated to contain 300,000,000 feet, from Calcasieu Timber Co.; will build double band sawmill with daily capacity 125,000 feet lumber; machinery contracts awarded; W. M. Cady (president W. M. Cady Lumber Co.) president. (Recently reported incorporated with \$500,000 capital stock and purchasing property.)

Miss., Kiln.—Wm. J. L. Engle, president of Union Naval Stores Co., New Orleans, La., purchased timber on 40,000 acres Hancock, Harrison and Pearl River counties land from Edw. Hines, Chicago, Ill., and associates; reported price \$1,000,000; buyer plans development by building sawmill, constructing railroad through timber tract, etc.; Mr. Engle wires Manufacturers Record: "Prefer to say nothing for publication." A later report states Mr. Engle has organized Jordan River Lumber Co., with \$250,000 capital stock, to develop this timber, purchased W. W. Carre Company sawmill property (at Kiln), is rebuilding Carre plant to increase annual capacity from 15,000,000 to 50,000,000 feet lumber, and will construct 25-mile standard-gauge railway; Jordan River officers as follows: President, Edw. Hines; vice-president, J. L. Dantzler of New Orleans; secretary, C. F. Wiehe of Chicago; treasurer, L. N. Dantzler of Gulfport, Miss.

N. C., Lewiston.—Roanoke River Log Co. (recently noted incorporated with \$30,000 capital stock by J. Davis Reed of Portsmouth, Va., and others) organized to cut logs on company's land and leases; has road eight miles long and other equipment; operations in 30 days; officers not elected. (See "Machinery Wanted.")

N. C., Wilmington.—Clark-Lynch Lumber Co., capital stock \$50,000, organized by C. E. Clark and H. A. Lynch.

Tenn., Memphis.—Arcola Hardwood Lumber Co., capital stock \$10,000, incorporated by C. D. Hendrickson, W. H. Harrelson, George Keuh and others.

Tex., Nacogdoches.—E. A. Blount states recent report of his purchase of pine timber near Nacogdoches is incorrect.

Tex., Texarkana.—H. E. Townsend will build hardwood mill; estimated cost \$15,000.

W. Va., Union.—Tri-State Lumber Co., J. H. Rush, vice-president, Unlontown, Pa., proposes to construct a main mill plant and later add a number of smaller plants in Johns Creek Valley, Craig county, to cut and handle recently-purchased timber on about 20,000 acres; estimated that tract contains from 100,000,000 to 150,000,000 feet lumber. (Recently noted.)

METAL-WORKING PLANTS

Tex., Houston.—Sheet-Iron Products.—Tennison Bros. increased capital stock from \$100,000 to \$150,000.

MINING

Ala., Birmingham.—Iron.—Inter-Mountain Ore Co., capital stock \$300, incorporated; George L. Watkins, president; R. G. Sloum, vice-president; A. F. Kennemer, secretary-treasurer.

Ala., Birmingham.—Iron.—Jefferson Iron Ore Co., capital stock \$300, incorporated; Thomas Dozier, president; R. G. Sloum, vice-president; A. F. Kennemer, secretary-treasurer.

Fla., Chicora.—Phosphate.—Davison Chemical Co., 601 602 Keyser Bldg., Baltimore, Md., purchased over 2000 acres phosphate land near Chicora; estimated to contain 8,000,000 tons of rock; no present intention of erecting plant.

Ga., Dahlonega.—Gold.—Findley Ridge Mining & Power Co., capital stock \$1,000,000, incorporated by E. E. Crisson of Dahlonega, J. R. Copeland and Charles Sumner of Birmingham, Ala.; acquire and develop New Findley Mine and properties of Georgia Gold Mining & Power Co.

Ky., Bowling Green.—Limestone.—Bowling Green Quarries Co. will install additional equipment and increase output of quarries; increased capital stock from \$50,000 to \$150,000. (Recently mentioned.)

Mo., Springfield.—Marble.—St. Elmo Quarry Co. (recently noted incorporated with \$50,000 capital stock) will develop 27 acres of marble quarry; capacity not determined; L. E. Hunt, president; C. A. Hubbard, vice-pres-

ident; C. Fred Hunt, secretary-treasurer. (See "Machinery Wanted.")

Mo., Vandalia.—Clay.—Laclede-Christy Clay Products Co. of St. Louis, Mo., purchased leases on 200 acres clay and coal lands near Vandalia; for present fire-clay will be shipped to St. Louis factory; also secured option on 25 acres land in event company decides to build plant in Vandalia.

Mo., Wayne County.—Williamsville, Greenville & St. Louis Railroad, Greenville, Mo., wires Manufacturers Record: "D. A. Adams, Canadian capitalist, is heading syndicate which purchased railroad and Wayne county iron and lumber company holdings." Unconfirmed dispatches state purchasers include Mr. Adams, who is of Prince Albert; Thomas Rogers of Mexico, Mo.; James W. Sanderson of Vancouver; John and Donald McLean and E. N. Maywood of Winnipeg; H. W. Laird of Regina; Robert Slowe of Montreal, and L. F. Woodman of Toronto. Properties include 86,000 acres iron and timber land, 65-mile railway with branches, etc., capitalized at \$3,000,000; understood purchasers plan to undertake full development.

Okl., Oklahoma City.—Marble, etc.—Southwestern Development Co., 218½ W. Grand Ave., will develop property in Oklahoma and Texas containing oil, gas, marble, clay and other minerals; Brown & Thomsen, Oklahoma City, engineers in charge. (Recently noted incorporated, under "Land Developments," at Chandler, Okla., with \$3000 capital stock.)

S. C., Gaffney.—Gold.—Flint Hill Gold Mining Co., L. U. Campbell, president, will install machinery at mines.

Tenn., Mascot.—Zinc.—Tennessee Zinc Co. (subsidiary of Tennessee Lead, Zinc & Smelting Co.), Knoxville, Tenn., purchased additional 200 acres zinc land at \$60,000 for development; has bored 150 zinc-producing holes on previous acreage and is sinking third shaft; previously purchased property at cost of \$250,000, and improvements have cost \$250,000; uses electricity (from Tennessee Power Co.'s Ocoee River hydro-electric development) for power.

Tenn., Milligan College.—Bauxite.—Burchfield & Simmons Bauxite Co. will develop 2500 acres containing bauxite. (Recently mentioned.)

Tex., Weatherford.—Shells.—J. C. Fawcett of New York is interested in establishment of plant and development of shell deposits at Weatherford.

MISCELLANEOUS CONSTRUCTION

Ark., Eureka Springs.—Tunnel.—Missouri & North Arkansas Railroad (W. O. Galbreath, engineer maintenance of way) will construct tunnel work near Eureka Springs, costing \$7000.

Ark., Little Rock.—Levee.—St. Francis Levee Board petitioned joint legislative levee committee to authorize additional bond issue of \$1,500,000 for levee improvement.

Ga., Savannah.—Wharves.—Central of Georgia Railway, C. K. Lawrence, chief engineer, will rebuild wharves burned at estimated loss of \$600,000.

Ga., Savannah.—Dredging.—Government will dredge in waterway between Savannah, Ga., and Fernandina, Fla., Club and Plantation creeks, Georgia, and harbor at Brunswick; bids received until March 4; Dan C. Kingman, Colonel, Engineers. (See "Machinery Wanted.")

La., New Orleans.—Canal.—Bids will soon be asked on construction of Calcasieu-Sabine section of Intercoastal Canal; U. S. Engineer's office, 325 Custom-house, New Orleans, advises Manufacturers Record that specifications will be obtainable and bids advertised about March 1.

Md., Baltimore.—Piers.—Northern Central Railroad Co., Alexander C. Shand, chief engineer, Philadelphia, Pa., will not erect freight piers as recently reported; plans extension of piers 3 and 4 only to Port Warden's line.

Miss., Bay St. Louis.—Seawall.—City Bond Commission, Joseph F. Caseneuve, chairman, invites bids until February 25 for constructing recently noted concrete seawall along front of city from south end of present concrete wall to north end of St. Stanislaus College breakwater, about 1500 feet; plans and specifications on file with R. F. O'Brien, clerk of Bond Commission. (See "Machinery Wanted.")

S. C., Charleston.—Dredging.—Government will dredge Sampit Bar and River, Winyah Bay, South Carolina; bids received until February 26; G. P. Howell, Major, Engineers. (See "Machinery Wanted.")

Tenn., Union City.—Obion River Drainage District No. 2, J. A. Coble, secretary Board

of Directors, is proceeding with plans for previously-noted reclamation; receives bids until noon February 21 for about 314,800 cubic yards levee work, 178,000 cubic yards ditch work, clearing and grubbing six miles levee base, constructing two concrete sluiceways, etc.; specifications with Mr. Coble; improvements to cost \$50,000 to \$60,000. (See "Machinery Wanted.")

Tex., Fort Worth—Levee.—City is considering construction of combined levee protecting Holly water-works, pumping station and railway on top for hauling coal to station and supplies to city warehouse. Address The Mayor.

Tex., Galveston—Dredging.—Government awarded contract to Bowers Southern Dredging Co. of Galveston to dredge Texas City channel; distance 34,687 feet from Bolivar Roads to Texas City docks; uniform depth to be 30 feet; C. S. Riche, Lieutenant-Colonel, Engineers, Galveston, Tex. (Recently mentioned.)

MISCELLANEOUS ENTERPRISES

Ga., Augusta—Printing.—Chronicle Building Co., Thomas W. Loyless, president, opens bids about March 1 to erect building; 40x120 feet; 10 stories and basement; fireproof construction; vacuum heat; electric lighting; two electric elevators; composition roof; cost \$200,000; architect, G. Lloyd Precher, Augusta. (Previously noted.)

Ga., Cordele—Crematory.—City contemplates building crematory. Address The Mayor.

Ky., Louisville—Laundry.—Columbia Laundry & Dry Cleaning Co., 2105 Garland Ave., capital stock \$40,000, incorporated; Ed X. Jackson, president; F. R. Sanders, manager.

Ky., Paducah—Incinerator Plant.—City opens bids April 1 to erect (recently noted) garbage incinerator plant; 30 to 50 tons capacity; T. N. Hazell, Mayor. (See "Machinery Wanted.")

Md., Baltimore—Engineering.—Chesapeake Engineering & Equipment Corporation, capital stock \$25,000, incorporated; N. B. Hods-kin, president and treasurer; E. D. Ford, vice-president, Chicago, Ill.; L. W. Lake, secretary; will promote and help finance new and old central station electric companies; also act as engineer and jobber of electrical machinery and supplies.

Md., Baltimore—Laundries.—United Laundries Co., capitalized at \$900,000, will organize to consolidate Elite, Antiseptic and Old Town steam laundries; George A. Kilne-felter of Elite company, Fayette and Greene Sts., will be president. (Lately mentioned.)

Md., Baltimore—Grain Elevator.—Western Maryland Railway Co., H. R. Pratt, chief engineer, Hillen Station, will build grain elevator at Port Covington; J. Robert Ramsey, Charles England and J. C. Vincent, committee from Chamber of Commerce, will be consulted relative to plans.

Mo., St. Louis—Printing.—Burgess Printing Co., capital stock \$500, incorporated by Charles T. Burgess, John A. Logan and Charles H. Pope.

Mo., St. Louis—Printing and Stationery.—Murphy-Lambey Printing & Stationery Co., capital stock \$600, incorporated by Hugo P. Lambey, Frank C. Murphy and Charles Peters.

N. C., Durham—Abattoir.—City (recently noted to erect \$25,000 abattoir) is asking correspondence relative to construction and equipment; J. L. Morehead, chairman special committee. (See "Machinery Wanted.")

N. C., Mount Airy—Contracting.—J. W. Bondurant Company, capital \$500, incorporated by J. W. Bondurant, John Bonner and J. R. Patterson; will contract for railroad construction, etc.

N. C., Raleigh—Publishing.—State Journal Co. organized with R. F. Beasley, president; W. F. Marshall, vice-president; Alexander J. Field, secretary-treasurer; will publish newspaper. (Recently noted incorporated with \$50,000 capital stock.)

N. C., Rocky Mount—Engineering and Construction.—Heywood-Royall-Ashby Company, capital stock \$25,000, incorporated by S. Heywood, N. N. Royall and P. R. Ashby.

Okl., Oklahoma City—Incinerator.—City Commissioners adopted plans for incinerator and ordered advertisement for bids; building will be 28x28 feet, of concrete; plant will be 30x11x11 feet, divided into two compartments; smokestack of brick, 80 feet high; daily capacity, 60 tons; cost of plant \$500, and of building \$200.

Okl., Sentinel—Printing.—Sword of Truth Printing Co., capital stock \$12,000, incorpo-

rated by William Tidball, A. T. Jones and A. M. Bradfield.

Okl., Stigler—Publishing.—Eureka Publishing Co. opens bids September 1 to erect brick and concrete building; 30x30 feet; S. J. Oslin, president; H. F. Morris, vice-president; C. M. Hicks, secretary; E. B. Wallace, treasurer. (Recently noted incorporated with \$10,000 capital stock.)

Tenn., Chattanooga—Landscaping and Gardening.—Chattanooga Landscape Co., capital stock \$500, incorporated by L. F. Lewis, J. C. McWhorter, A. M. Willard and others.

Tenn., Lewisburg—Laundry.—Sunbeam Laundry will erect concrete-block building; 30x70 feet; three stories; opens bids March 15; cost of machinery, \$350.

Tenn., Memphis—Laundry.—Banner Laundry, capital stock \$75,000, incorporated by L. L. King, C. H. Hudson, H. R. Wenzler and others.

Tenn., Memphis—Laundry.—Memphis Steam Laundry Co. increased capital stock from \$100,000 to \$150,000; states not contemplating any extensive improvements at present.

Tenn., Nashville—Engineering-Contracting.—C. B. Wilson Company, capital stock \$10,000, incorporated by C. B. Wilson, W. H. Whorley, B. L. Peebles and others.

Tex., Amarillo—Engineering.—Hickox-Whyman Engineering Corporation, Fuqua Bldg. (recently noted incorporated, \$6000 capital stock), will conduct general construction in irrigation wells, dams, railroads, municipal improvements and concrete silos; D. L. Hickox, president; R. O. Whyman, vice-president and manager; W. I. Busby, secretary-treasurer.

Tex., Beeville—Laundry.—J. A. Walker and J. Alex. Jennings of Crystal City, Tex., will build steam laundry.

Va., Norfolk—Laundry.—Model Laundry increased maximum capital stock from \$10,000 to \$20,000.

W. Va., Fairmont—Construction.—Hawkins Construction Co., capital stock \$30,000, incorporated by William E. Hawkins, J. Guy Hawkins, William C. Hawkins and others.

W. Va., Huntington—Patents.—United Appliance Co., capital stock \$150,000, incorporated by M. P. Wiswell, John S. Shepperd, M. A. Simms and others.

MISCELLANEOUS FACTORIES

Ala., Birmingham—Creamery.—Birmingham Dairy Creamery Co., capital stock \$750, incorporated; James B. Brannum, president; L. W. Burt, secretary-treasurer.

Ala., Birmingham—Automatic Vender.—Sanitary Cigar Salesman Co., capital stock \$400, incorporated by H. M. Jones, G. W. Lindsay and M. K. Moore to manufacture automatic device for vending cigars and chewing-gum.

Ala., Birmingham—Beverage.—Pee-to-Lac Company increased capital stock from \$100,000 to \$500,000 and will establish plant in Birmingham; John L. Parker of Birmingham is president.

Ala., Citronelle—Gloves.—E. G. Bradley contemplates establishing plant to manufacture cotton flannel gloves. (See "Machinery Wanted.")

Ala., Mobile—Syrup.—Mobile Sugar Development Co., St. Joseph and Bloodgood Sts., leased building and will operate syrup factory; machinery purchased; L. J. Knox, president, Calvert, Tex.; L. L. Dugger, vice-president, Fidelity Bldg.; G. E. Nesom, general manager and treasurer; recently noted incorporated, \$10,000 capital stock. (See "Machinery Wanted.")

Ala., Mobile—Shirts.—Mobile Shirt Co. (Ben H. Thomas and E. C. Cooper) secured third floor of building on Water St. and will equip; sufficient space for 25 to 30 machines.

Fla., Micanopy—Turpentine.—Monroe Venable of Archer, Fla., purchased half interest in turpentine and timber interests aggregating valuation of \$50,000; properties embrace stills at Micanopy, Flemington and Millwood and 4000 acres timber land.

Ark., Fort Smith—Distillery.—Rush Distilling Co., capital stock \$25,000, incorporated; continue established enterprise; John L. Casper, president; O. E. Thompson, vice-president; S. L. Williams, secretary-treasurer.

Fla., Miami—Crackers, etc.—G. H. Christensen, Dewitt, Iowa, is considering "Miami Cracker Co." as name of recently-noted proposed company to manufacture crackers and cookies; states has not made arrangements for building or machinery; will receive prices, cuts, plans, etc. (See "Machinery Wanted.")

Fla., Tampa—Cigars.—Charles-Martinez

Cigar Co., Jacksonville, Fla., contemplates establishing plant.

Ga., Atlanta—Tires.—Interstate Automobile Tire & Rubber Co. organized by Mr. Fallbaum and others to manufacture automobile tires; secured factory buildings.

Ga., Atlanta—Door Device.—Moore Door Building Device Co., 157 Elizabeth St., organized with H. E. Moore, president; Robert S. Key, treasurer; H. O. Cason, secretary; will manufacture patented door device. (See "Machinery Wanted.")

Ga., Lagrange—Monuments.—J. A. Moore & Co., J. A. Moore, president, Canton Ga., will establish plant (recently noted) to manufacture monuments; machinery will include electric motor, air compressor, air receiver, emery stand and pneumatic tools; machinery bids opened March 1; daily capacity, 200 monuments. (See "Machinery Wanted.")

Ky., Lexington—Distillery.—Henry Clay Distilling Co., capital \$100,000, incorporated by Mat Walton, George C. Roberts and John de Beer.

Ky., Louisville—Candy.—Clarke Candy Co., capital \$500, incorporated by C. A. Ray, Sr., N. H. Clarke and C. N. Schwab.

La., New Orleans—Distillery.—International Distillery Co. will erect building; one story; steel frame; cost \$5000.

La., New Orleans—Sugar Factories.—Chas. Godchaux, president of Whitney-Central National Bank, and Charles A. Farwell are interested in plan to organize \$50,000,000 corporation to control sugar factories; Mr. Godchaux wires Manufacturers Record: "Matters have not progressed sufficiently to give full details; matter proposed is consolidation of sugar factories with a view of greater economy of operation."

Md., Baltimore—Bakery.—City Baking Co., 509 Equitable Bldg., will erect bakery on site bounded by Laurens, Carey, Winchester and Woodyear Sts.; John Freund, Jr., H. E. Lexington St., is preparing building plans and specifications for 156x254-foot mill-construction building; will install equipment with daily capacity 50,000 loaves; building reported to be of brick and steel construction and to contain air-conditioning and humidifying plant, chemical laboratory and miniature bakery for sample loaves; W. D. White, secretary. (See "Machinery Wanted.")

Md., Baltimore—Ice-cream.—Fairmount Ice Cream Co., capital stock \$1000, incorporated by Thomas E. Hunter (339 Elm St.), A. Herman Siskind and Harry Israleson.

Miss., Kiln—Turpentine.—Imperial Naval Stores Co. purchased turpentine rights on Jordan River Lumber Co.'s 40,000 acres and will build plant.

Miss., McComb.—Causey's No-Leak Manufacturing Co., capitalized at \$1000, incorporated by J. E. Alford, Thomas Purser, W. H. Jackson and others.

Miss., Vicksburg—Self-heating Irons.—Vicksburg Self-Heating Iron & Manufacturing Co., capitalized at \$10,000, incorporated by T. R. Foster, Harry E. Rice and others.

Mo., Joplin—Paper Bottles.—Purity Paper Bottle Corporation, 1341 S. Capitol St., Washington, D. C., contemplates establishing branch plant.

Mo., St. Louis—Liquid Receptacles.—Liquid Dispenser Manufacturing Co., Real Estate Bldg., recently noted incorporated, \$2500 capital stock, to manufacture receptacles for liquids dispensing, will have daily capacity of about 1000; Wm. D. McClain, president; John A. Hurster, vice-president and treasurer; Taylor R. Young, secretary. (See "Machinery Wanted.")

Mo., St. Louis—Garments.—Loewenstein Bros. Garment Co., capital stock \$15,000, incorporated by Berthold J. David and Walter M. Loewenstein.

Mo., St. Louis—Julius Schleuter will erect addition to factory at 4622 N. Broadway; cost \$3000.

Mo., St. Louis—Paper Cans and Tubes.—St. Louis Paper Can & Tube Co. is having plans prepared by Stephens & Pearson, 765 Olive St., for plant; two stories; cost \$45,000.

N. C., Charlotte—Films.—Eagle Film Co., capital \$125,000, incorporated by W. F. Aldrich, R. D. Craven and A. F. Sams.

N. C., Charlotte—Tents and Awnings.—Charlotte Tent & Awning Co., capital \$25,000, incorporated by R. C. Price, S. W. Dandridge and Robert S. Seffey.

N. C., Greensboro—Ice-cream.—Arctic Ice-Cream Co. will install additional machinery, including pasteurizer; equipment ordered.

N. C., Durham—Cigarettes.—American Tobacco Co. (main offices in New York) will install machinery to manufacture Sovereign cigarettes; equip four-story building.

N. C., Raleigh—Powder.—Union Metallic

Cartridge Co., Bridgeport, Conn., states recently-noted report of land purchase, etc., at Raleigh is incorrect.

N. C., Raleigh—Poultry Food.—Hen Cackle Poultry Supply Co., capital stock \$25,000, incorporated by W. M. Smith and W. L. Wyatt of Raleigh and H. W. Hargis of Cary, N. C.

N. C., Rocky Mount—Clothes Line.—Rocky Mount Pinless Clothes Line Co., capital \$125,000, incorporated by J. C. Braswell, George S. Edwards, H. S. Pool and others.

S. C., Bradley—Bradley Manufacturing Co. (recently noted incorporated) was organized to operate cotton gin and oil mill. (See "Cottonseed-oil Mills.")

S. C., Spartanburg—Bakery.—August Geilfuss will build bakery; cost \$20,000.

Tenn., Bristol—Candles.—Gibson-Helms Company increased capital stock from \$30,000 to \$50,000.

Tenn., Chattanooga—Medicine.—Planks' Chill Tonic Co., capital stock \$50,000, incorporated by F. M. Plank, W. B. Swaney, J. B. Nicklin and others.

Tenn., Memphis—Pies.—Connecticut Pie Co., capital stock \$2000, incorporated by I. C. Alistadt, J. H. Alistadt, R. G. Welford and others.

Tenn., Memphis—Snuff.—American Snuff Co. will erect 180x200-foot building; concrete construction; will install machinery; date of opening bids for construction and machinery not fixed; daily capacity, 20,000 to 25,000 pounds of snuff; Francisco & Jacobus, 200 Fifth Ave., New York, engineers and architects. (Recently noted to cost \$35,000.)

Tenn., Memphis—Candy.—Harris Ivy Candy Co., capital stock \$50,000, incorporated by R. D. Harris, J. W. Ivy, Charles W. Partee, Jr., W. L. Green and R. I. Moore.

Tenn., Nashville—Overalls.—Volunteer Manufacturing Co. increased capital stock from \$50,000 to \$75,000.

Tenn., Nashville—Chemicals.—Southern Chemical & Manufacturing Co., capital \$10,000, incorporated by W. Barks, N. V. Cooney, E. W. Swinehart, E. E. Knight and R. R. Barks.

Tenn., Nashville—Advertising Novelties.—The Bell Company incorporated by B. P. Bell, J. T. Bell, A. C. Miffelin, V. P. Rice and Thomas G. Kittrell; will continue present plant and improve facilities.

Tenn., Nashville—Overalls.—J. S. Reeves & Co. will rebuild burned overall factory; awarded contract.

Tex., Beeville.—H. J. Hackett of San Antonio, Tex., will establish ice-cream factory; install equipment in Beeville Manufacturing Co.'s plant.

Tex., Houston—Tools.—Sharp-Hughes Tool Co., capital stock \$300,000, incorporated; will acquire enterprise of Sharp & Hughes and continue manufacture of patented rotary drilling bit.

Tex., Houston—Implements, etc.—South Texas Implement & Vehicle Co. increased capital stock from \$75,000 to \$100,000.

Tex., Ladonia—Drugs.—Burroughs-Mallow Drug Co., capital stock \$10,000, incorporated by K. C. Burroughs, L. F. Mallow and John H. Kelsey.

Tex., Orange—Candy.—J. A. Snoddy will erect building; 29x40 feet; equip for manufacturing candy.

Tex., Sherman—Granaries.—Texas Ventilated Granary Co., capital stock \$250, incorporated by J. H. Chenault, George Opel and W. Elliott.

Va., Alexandria—Spark Plugs.—Express Spark Plug Co. of America, capital \$200,000, incorporated; C. H. Duffy, president, Laurel, Md.; John Keane, secretary; Leo Loughran, vice-president; both of Washington, D. C.

Va., Alexandria—Fruit Products.—National Fruit Products Co., capital stock \$200,000, incorporated; Rupert N. Koblegard, president; S. Cooper Dawson, treasurer, both of Washington, D. C.; Gardner L. Boothe, secretary, Alexandria.

Va., Charlottesville—Ground Bark.—Albemarle Mills Co. succeeds Landram Bros.; will grind chestnut oak bark, black oak bark and Virginia sumac for dyers, tanners and color makers; John L. Barnes, president; Bennett H. Barnes, treasurer; C. R. Delaney, secretary. (Recent incorporation notice, capital stock \$25,000, under "Flour, Feed and Meal Mills.")

Va., Lynchburg—Tobacco.—G. Stalling & Co. will, it is reported, erect tobacco factory; Stalling company advises has purchased some real estate, but has made no building plans.

Va., Lynchburg—Bakery.—H. Miller leased building at 57 9th St.; will remodel and equip as bakery; opens building proposals about March 1.

Va., Martinsville-Tobacco.—W. A. Brown Tobacco Co., capital stock \$75,000, incorporated; G. B. Dudley, president; J. E. Howard, vice-president; G. B. Dudley, Jr., secretary-treasurer.

Va., Norfolk—Ice-cream.—Maryland Ice-Cream Corporation, capital \$500,000, chartered; H. N. Rogers, president; O. L. Shackelford, vice-president; T. P. Gray, secretary-treasurer.

Va., Norfolk.—Exo Manufacturing Co., capital stock \$50,000, incorporated; Jerome Chambers, president; Logan L. Mallard, secretary-treasurer.

Va., Norfolk-Beds.—Norfolk Bed Manufacturing Co., capital stock \$15,000, incorporated; E. C. Threacraft, president; B. F. Hubbard, vice-president; T. S. Hubbard, secretary-treasurer.

Va., Norfolk-Burlap Bags.—J. J. Fisher & Bro. of Baltimore, Md., secured warehouse, it is reported, and will equip for manufacturing burlap bags.

Va., Petersburg—Pens.—Edison Pen Co., capital \$15,000, incorporated; F. D. Cromer, president; George S. Bernard, Jr., vice-president; S. W. Holden, secretary-treasurer.

Va., Richmond—Roofing.—Piper Roofing Co. of Durham, N. C., reorganized as Piper Roofing & Manufacturing Co. with \$100,000 capital stock, and elected following officers: J. A. Piper, president; W. P. Budd, vice-president, and R. E. Piper, secretary-treasurer-general manager; acquired plant of Armitage Manufacturing Co. of Richmond and continue manufacture of roofing materials, mainly pitch and felt roofing; main offices will be in Richmond.

W. Va., New Martinsville—Creamery and Dairy.—Monroe-Wetzel Dairy Co., capital stock \$10,000, incorporated by David H. Cox, Isaiah Morgan, George P. Umstead of Martinsburg, W. Va., and others.

Va., West Point—Pulp.—Chesapeake Pulp & Paper Co., Lockland, O. (recently noted) organized and contemplating immediate construction of pulp plant, has been incorporated, \$250,000 to \$300,000 capital stock; president and manager, Harold W. Nichols, 2315 Madison Rd., Cincinnati, O.; treasurer, Melville T. Nichols; regarding construction and equipment, company advises: "Everything will be done under contract—buildings included;" plans by George F. Hardy, 309 Broadway, New York, to whom machinery proposals should be addressed; reported that plant will be placed on 24-acre tract, with brick or cement buildings, to be completed by November 1, and cost about \$250,000; this will be first unit, with annual capacity 12,000 tons wet pulp; other units planned for future.

W. Va., Bluefield—Creamery and Dairy.—A. G. McCue is promoting organization of company to purchase 230-acre farm and establish creamery and dairy.

W. Va., Warwood—Polish.—Veneer Manufacturing Co. proposes increasing capital stock from \$5000 to \$50,000.

MOTORS AND GARAGES

D. C., Washington—Garage.—E. E. Berry will repair garage at 2129 14th St. N. W.; cost \$5900.

Ky., Paris—Automobiles.—Yerkes & Pritchard will build machine shop for repairing automobiles.

Md., Baltimore—Garage.—Gilbert H. Wehr is having plans prepared for garage at 125 W. North Ave.; two stories; brick; H. H. MacLellan, 9 N. Calhoun St., Baltimore, will be contractor.

Mo., St. Louis—Automobiles.—Benjamin Harris of Cincinnati, O., purchased site, 50x155 feet, for \$81,000, and will erect building for automobile purposes.

N. C., Newbern—Garage.—Eugene Williams awarded contract to H. S. Hancock to erect brick garage.

Tenn., Knoxville—Automobiles.—Cadillac Sales Co., capital stock \$10,000, will be incorporated by T. T. Pace, E. C. Mahan, Ben A. Morton and others; will build showroom and repair shop.

Tenn., Paducah—Garage.—Mrs. Sallie Roberts Hampton will erect garage; two stories; brick; elevator.

Tex., Sherman—Garage.—Washington Iron Works Co. will build garage. (See "Foundry and Machine Plants.")

Tex., Waxahachie—Garage.—W. B. Jackson will build garage; brick; cement floor.

Va., Petersburg—Automobiles.—Virginia Motor & Machine Corporation, capital stock \$10,000, chartered; W. E. Weiss, president; C. F. Denton, vice-president; J. B. Andrews, secretary-treasurer.

Va., Richmond—Garage.—I. Kaufman and Maurice Block will erect detached two-story brick garage to cost \$18,000.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ark., Eureka Springs.—Missouri & North Arkansas Railroad (W. O. Galbreath, engineer maintenance of way) will build temporary shops costing \$10,000.

Ark., Harrison.—Missouri & North Arkansas Railroad (W. O. Galbreath, engineer maintenance of way, Eureka Springs, Ark.) will build shops costing \$10,000.

La., Algiers, Station A New Orleans.—Southern Pacific Railway, Hiram W. Sheridan general superintendent, New Orleans, La., will increase shop facilities. (See La., Lafayette.)

La., Lafayette.—Southern Pacific Railway, Hiram W. Sheridan, general superintendent, New Orleans, La., will erect buildings and increase shop facilities at Lafayette and Algiers, La.; reported to expend \$250,000.

Md., Baltimore.—Western Maryland Railway Co., H. R. Pratt, chief engineer, Hillen Station, purchased remaining portion of Port Covington tract (90 acres) at about \$300,000; plans extensions to terminal facilities, including construction of coal piers, general freight piers, freight warehouse, grain elevators, trackage for freight handling, etc.; will finance through Western Maryland Terminal Co.

Mo., Joplin.—Missouri Pacific Railway system, J. R. Stephens, chief engineer, St. Louis, Mo., and Missouri, Oklahoma & Gulf Railway, J. J. Harrison, chief engineer, Muskogee, Okla., contemplate expending \$150,000 in improvements; proposed to build roundhouse containing 10 or 12 stalls and machine shop; probably of concrete construction; cost \$6000; also coal chute to cost \$10,000.

Mo., Moberly.—Moberly, Huntsville & Randolph Springs Electric Railway, J. J. Munderger, chief engineer, Huntsville, Mo., will build terminals.

Tex., Galveston.—Gulf, Colorado & Santa Fe Railway, F. Merritt, chief engineer, Galveston, Tex., will expend \$1,500,000 for improvements in Texas during coming year: Shops, engine-houses and turntables, \$200,000; siding and spur tracks, \$230,000; water and fuel stations, \$160,000; terminal yards, \$140,000; station buildings and fixtures, \$125,000; track fastenings and appurtenances, \$115,000; increased weight of rail, \$80,000; right of way and station grounds, \$50,000; bridges, trestles and culverts, \$50,000; additional main tracks, \$40,000; block and other signal apparatus, \$38,000; telegraph and telephone lines, \$28,000; shop machinery and tools, \$26,000; protection to banks and drainage, \$25,000; dock and wharf properties, \$21,000; fencing right of way, \$20,000; ballasting, \$20,000; improved frogs and switches, \$50,000; interlocking plants, \$1500; miscellaneous additions and betterments, \$39,000; items do not include terminals at Brownwood, Tex., costing \$500,000, or Galveston union depot and office building to cost about \$500,000, details of which have been previously announced.

ROAD AND STREET WORK

Ala., Cullman.—Cullman county votes March 10 on \$230,000 bond issue for road construction. Address County Commissioners.

Ala., Falkville.—Town will improve streets. Address Town Clerk.

Ala., Selma.—City will construct 28,000 yards of either asphalt, wood block or hansom pavement on concrete foundation on Lauderdale St. and Dallas Ave., together with necessary storm sewers, manholes, curbing, inlets, etc.; bids received until February 7; Julien Smith, City Engineer. (See "Machinery Wanted.")

Fla., Brooksville.—Hernando county postponed election (recently reported to be held February 15) for two months to vote on \$100,000 bond issue for road construction.

Fla., Brooksville.—City awarded contract to Alabama Paving Co., 810 American Trust Bldg., Birmingham, Ala., to construct 10,000 square yards vitrified brick pavement in business section; amount available \$19,950; C. I. Chapman, engineer in charge. (Recently noted.)

Fla., Plant City.—City votes March 18 on bond issue for street paving. Address The Mayor.

Ga., Atlanta.—Park Board, J. O. Cochran, president, will expend \$15,000 during year to improve roadways in Grant Park.

Ga., Waycross.—City will improve Albany Ave.; bids received until 7.30 P. M. February 18 for laying (blocks already purchased) of 6000 square yards asphalt blocks and construction of 4500 linear feet granite or concrete curbing; B. H. Klyce, City Engineer. (See "Machinery Wanted.")

Ky., Louisville.—City will construct fol-

lowing work: Letting No. 479, sheet asphalt, creosoted wood block or vitrified brick pavements, two contracts, embracing 18,350 square yards; letting No. 480, sheet asphalt pavement, four contracts, 19,075 square yards; letting No. 481, vitrified block pavement, four contracts, 19,075 square yards; letting No. 482, sheet asphalt pavement, four contracts, 11,800 square yards; letting No. 483, vitrified block pavement, 16 contracts, 27,615 square yards; letting No. 484, vitrified block alley pavement, seven contracts, 3570 square yards, and letting No. 485, concrete sidewalk, 29 contracts, embracing 6740 square yards; bids received until February 11; D. R. Lyman, chief engineer; recently incompletely mentioned. (See "Machinery Wanted.")

Ky., Pikeville.—City awarded contract to Kelley Bros. of Portsmouth, O., for 25,000 square yards street paving; Stonely Amick, City Engineer. (Previously mentioned.)

La., Melville.—City will construct concrete sidewalks; cost \$5000; C. W. Stone and E. G. Richard in charge; bids opened February 4; E. J. LeBlanc, City Clerk. (Recently mentioned.)

La., Shreveport.—Concrete driveway and pavement will be constructed at Charity Hospital, Texas Ave. and Murphy St.; bids opened February 10. (See "Machinery Wanted.")

La., Shreveport.—City votes March 4 on \$100,000 bond issue for resurfacing and graveling streets. Address The Mayor. (Date of election postponed from February 4, lately stated.)

N. C., Cherryville.—City contemplates voting on \$45,000 bond issue to improve streets, etc. Address The Mayor. (See "Electric Plants.")

Okla., Oklahoma City.—City will resurface with asphaltic concrete intersection of 12th St. and Hudson Ave., total width of 30 feet; bids received until 1.30 P. M. February 11; C. R. Goucher, City Clerk. (See "Machinery Wanted.")

Okla., Tulsa.—City will construct certain concrete sidewalks; T. C. Hughes, City Engineer; bids received until February 7. (See "Machinery Wanted.")

Tenn., Lonsdale, R. Sta., Knoxville.—H. E. Christensen, Mayor, states recently-noted bond issue is to retire sanitary and street improvement certificates of indebtedness.

Tex., Abilene.—City will improve 16 streets, including South First, Kirkland, Chestnut and other streets, and authorized City Secretary to advertise for bids. E. N. Kirby, Mayor.

Tex., Bay City.—Matagorda county votes March 1 on \$300,000 bond issue for road construction. Address County Commissioners.

Tex., Dallas.—Texas Motorway Co. (recently noted) incorporated with \$10,000 capital stock, 511 Sumter Bldg., organized with J. B. Chestensen, president; George W. Baker, secretary-treasurer; will construct 60 miles rock ballast road; first section to be built between Dallas and Glen Rose, Tex.; estimated cost, \$300,000; bids opened February 15; G. L. Cade, engineer in charge. (See "Machinery Wanted.")

Tex., Greenville.—City will pave portions of various streets; improvements include three-inch creosoted wood block pavement on four-inch concrete foundation with concrete gutters along curb line 18 inches wide; 2½-inch creosoted wood block pavement on four-inch concrete foundation with concrete gutters along curb line 18 inches wide; vitrified brick pavement from curb to curb on four-inch concrete foundation; vibrolithic concrete pavement; bitulithic pavement on four-inch concrete foundation with concrete gutters along curb line 18 inches wide; dolerite concrete pavement; concrete pavement with bituminous rock wearing surface; asphaltic concrete pavement; concrete curb on curb line; bids received until February 11; W. A. Frazer, City Clerk. (See "Machinery Wanted.")

Tex., Houston.—City will construct paving on Hogan and Lorraine from Montgomery Ave. to Carr St., Washington St., La Branch and Burlington Sts.; bids received at office of Dan C. Smith, Jr., city secretary, until 12 noon February 10; specifications and information with F. L. Dormant, city engineer. (See "Machinery Wanted.")

Tex., Palacios.—Matagorda County Commissioners invite bids to shell 10 miles of road; \$100,000 bond issue recently reported voted.

Tex., San Angelo.—City will expend \$35,000 to construct 40,000 square yards asphalt macadam pavement on concrete base; J. J. Goodfellow, engineer in charge; contract awarded to Peerless Construction Co., R. D. Moxley, president, Sweetwater, Tex. (Recently noted.)

Tex., San Benito.—City will pave six blocks of Sam Houston Ave.; proposed to use wood blocks on concrete base. Address The Mayor.

Tex., Sweetwater.—City awarded contract to Moxley & Co. of Sweetwater at about \$50,000 for 40,000 square yards asphalt paving on concrete base.

Tex., Temple.—City will vote in April on \$170,000 bond issue for eight miles street paving; W. E. Dozier, City Engineer. (Amount increased from \$75,000 recently stated.)

Va., Martinsville.—City will construct 3000 yards granolithic walk; bids received until February 27; specifications at office of J. R. Gregory; J. T. Penn, chairman Board of Managers. (See "Machinery Wanted.")

Va., Highland Park, P. O. at Richmond.—Town contemplates voting on \$75,000 bond issue to pave sidewalks, grade and macadamize streets and improve park. Address Town Clerk.

Va., Petersburg.—R. E. McPherson, R. H. Mann (Commonwealth Attorney) and others are promoting construction of road from Petersburg to point in county five miles distant.

Va., Rocky Mount.—City contemplates \$200,000 bond issue, it is reported, for street paving, sidewalks, sewer system, electric-light system and refunding present indebtedness. Address The Mayor.

SEWER CONSTRUCTION

Ala., Tuskegee.—Walter G. Franz, Union Trust Bldg., Cincinnati, O. (recently noted as consulting engineer), states bids will be received at his office until noon February 15, and then privately opened, for construction of 4, 6, 8 and 10-inch vitrified tile sewer, with brick manholes, etc., at Tuskegee Normal and Industrial Institute; plans, etc., at engineer's office and with R. R. Taylor, director of industries, at the institute.

Ark., Wynne.—City will make sewer improvements, including 5630 feet 15-inch, 3050 feet 12-inch, 2650 feet 10-inch, 16,000 feet 8-inch and 13,200 feet 6-inch sewer pipe; Board of Commissioners receives proposals until 1.30 P. M. February 21; R. C. Huston & Co., consulting engineers, 639 Exchange Bldg., Memphis, Tenn. (See "Water-works and Machinery Wanted.")

Fla., Plant City.—City votes March 18 on bond issue to construct sewer system. Address The Mayor.

Fla., Tampa.—Board of Public Works, D. B. McKay, chairman, receives bids until 1 P. M. February 18 for construction of reinforced concrete storm drains in Hyde Park recently noted estimated to cost \$40,000. (See "Machinery Wanted.")

Ga., Cornelia.—City votes February 15 on bond issue for sewer construction recently noted to cost \$5000; P. Duckett, City Clerk.

Ky., Louisville.—Board of Public Works will open bids February 7 for construction of sewers totaling two miles in length in South Louisville, to cost about \$10,000, and on February 25 for additional sewers ¼ miles long.

Md., Baltimore.—Sewerage Commission awarded contract to Frank Bruno & Co. of Newark, N. J., at \$117,873.52 to construct lateral sewers in district No. 8, sanitary contract No. 107; require 35,000 linear feet vitrified pipe sewer connections and 39,000 linear feet vitrified pipe sewer, 8 inches to 24 inches in diameter. (Call for bids lately noted.)

Mo., Maplewood.—City will construct 100 feet 36-inch brick sewers (recently noted), 300 feet 27-inch, 600 feet 24-inch, 800 feet 21-inch, 490 feet 18-inch and 5600 feet 12-inch pipe sewers; bids opened February 11; S. W. Shinkle, City Engineer. (See "Machinery Wanted.")

Mo., Pittsburg.—Town contemplates constructing sewer and water systems; estimated cost \$23,000. Address Town Clerk.

N. C., Clayton.—City will construct sewer system, water-works and electric-light plant; sewers will include three miles of pipe sewers 8 to 15 inches in diameter, and appurtenances; bids received until February 25; Gilbert C. White, engineer, Charlotte, N. C. (See "Water-works and Machinery Wanted.")

N. C., Wilmington.—City awarded contract to American Light & Water Co. of Chicago, Ill., at \$152,000 to construct 32 miles vitrified, concrete and cast-iron sewers, 8 to 24 inches diameter, complete with appurtenances; contract recently reported awarded to Martin & Miller of Passaic, N. J., has been withdrawn; F. F. Pillett, City Engineer.

Tex., Houston.—City awarded contract to H. C. Gass of Belleville, Ill., at \$43,250.55 to construct storm sewers in First and Sixth wards; work consists of about 1600 feet four-foot, 1173 feet five-foot and 1333 feet six-foot

sewers; 16 manholes, 50 catch-basins and 1600 feet catch-basin connections; F. L. Dormant, City Engineer. (Call for bids lately noted.)

Tex., Bishop.—F. Z. Bishop, Room F Eugeneheim & Cohn Bldg., Corpus Christi, Tex. (owner of Bishop townsite), advises he has contracted with Trueheart & Jackson, San Antonio, Tex., to install about five miles sewer pipe at Bishop. (See "Machinery Wanted.")

Tex., Temple.—City will vote in April on \$50,000 bond issue to construct sanitary and storm sewers; W. E. Dozier, City Engineer. (Recently noted.)

Va., Ashland.—Town defeated \$50,000 bond issue to construct sewer system and water-works. Address Town Clerk. (Recently incorrectly reported to have voted bonds.)

Va., Bridgewater.—City votes February 21 on \$25,000 bond issue for sewer system and water-works; Otis W. Wine, chairman of finance committee.

Va., Rocky Mount.—City contemplates, it is reported, \$200,000 bond issue for sewer construction, etc. Address The Mayor. (See "Road and Street Work.")

TELEPHONE SYSTEMS

Fla., Winter Park.—Carl H. Galloway, Maitland, Fla., has telephone franchise; will acquire and extend present Reynolds telephone system.

Md., Cambridge.—Chesapeake & Potomac Telephone Co., main office 5 Light St., Baltimore, Md., will improve system at Cambridge; purchased site for fireproof addition to telephone exchange.

Md., Salisbury.—Chesapeake & Potomac Telephone Co., main office 5 Light St., Baltimore, Md., will improve system at Salisbury; expend \$50,000.

N. C., Archer.—Archer Telephone Co. incorporated with R. R. Guiley, president; J. W. Barnes, vice-president; W. L. Stancil, secretary-treasurer.

N. C., Shoals.—Shoals Telephone Co., capital stock \$100, incorporated by H. E. Spalmer and others.

N. C., Siler City.—Siler City Light & Telephone Co., capital stock \$17,500, incorporated; contemplates acquiring and operating Matthews Telephone Co.'s system. J. Wade Siler, secretary-treasurer, states will not construct any telephone lines at present. (See "Water-Power Developments.")

Okla., Blackwell.—Bethel Telephone Co. incorporated by L. J. Burkhalter, M. Bacon and C. J. Weiner.

Okla., Guthrie.—Cottonwood Telephone Co. incorporated by J. A. Purviance, P. H. Cooper, N. G. Rich, P. B. Winthorpe and Gus Freundt.

Tex., Del Rio.—Del Rio & Western Telephone Co. increased capital stock from \$80,000 to \$100,000.

Va., Mangohick.—Farmers' Union Telephone Co., capital stock \$5000, incorporated; W. T. Mookar, president, Mangohick, Va.; J. O. Hutchinson, vice-president, Hanover, Va.; E. W. Fox, secretary-treasurer, Luther, Va.

TEXTILE MILLS

N. C., Lilesville.—Cotton Goods.—J. W. Kaneer plans organization of \$250,000 company to build cotton mill.

N. C., Kinston.—Hosiery Yarns.—Caswell Cotton Mills advises Manufacturers Record that company will increase (doubling) capacity of plant from 5472 to 11,000 spindles, and will add to present two-story building a 100-foot structure for the new machinery.

N. C., Lexington.—Cotton Cloth.—Bel-Ville Mills, care George W. Montcastle, will erect one and two-story 66x132-foot building, of mill construction, costing about \$125,000; date of opening bids not determined; will install 25,000 spindles, 650 40-inch looms, 1500 horse-power electrical equipment, etc.; engineer-architect in charge, J. E. Sirrine of Greenville, S. C. (Recently reported organized, etc.)

S. C., Charleston.—Silk.—George Singleton of Singleton Silk Manufacturing Co., Dover, N. J., is reported as planning to establish silk mill.

S. C., Greenville.—Waste Goods.—John B. Marshall plans formation of company to establish cotton waste mill.

WATER-POWER DEVELOPMENTS

Ark., Pine Bluff.—Russellville Water & Light Co. awarded contract for recently noted repairs to damaged spillway, etc.

D. C., Washington.—Col. C. W. Langfitt, U. S. A., with Clemens Herschel of New York as consulting engineer, completed in-

vestigations of water-power possibilities of Great Falls of Potomac River in Maryland near Washington; recommends construction of hydro-electric plant; dam, if authorized, will be at base of Little Falls, 12 miles from Great Falls, and will hold water, back it up, and even rise to level of water above Great Falls; dam 110 feet high, between 70 and 90 feet thick at base, and 1000 feet long; estimated that from 8000 to 10,000 horse-power can be developed at lowest flow and 30,000 horse-power at highest flow; when water is low a steam auxiliary plant will be employed; estimated cost, \$10,000,000; Judson C. Welliver is District Engineer.

Ga., Cornelia.—Wofford Shoals Light & Power Co., J. A. Wells, engineer in charge, states its Nancytown Creek (Banks county) water-power (which will afford 500 to 800 horse-power) now under partial development supplies 150 horse-power, transmitting electricity 10 miles to Alto, Cornelia, Mt. Airy, Baldwin and State Tuberculosis Sanitarium; also has undeveloped water-power on Big Panther Creek, Habersham county, which will afford 4000 to 12,000 horse-power, according to development; authorized capital stock, \$100,000.

Ga., Pickens County.—Tate Industrial School, Samuel Tate, president, Tate, Ga., commissioned Cook & Swope, landscape architects, Atlanta Trust Bldg., Atlanta, Ga., to prepare plans for dam, etc. (See "Schools.")

Ga., Tallulah.—Southern Power Co., Charlotte, N. C., contracted with Georgia Railway & Power Co., Atlanta, Ga., for surplus electricity (about 14,000 horse-power) of Tallulah Falls development and will extend transmission southward from Easley, S. C., to Tallulah.

Md., Friendsville.—John Bogart, 141 Broadway, New York, engineer for Youghiogheny Power Co., C. L. Pullen, vice-president, 2 Rector St., New York, writes to Manufacturers Record: "Arrangement for commencement of work are in progress; expect to start work this spring; will send information in detail as soon as plans are perfected." (Company previously reported organized to build \$4,000,000 hydro-electric plant, develop 40,000 horse-power, etc.)

N. C., Saluda.—Manufacturers Power Co., Ladshaw & Ladshaw, engineers, Spartanburg, S. C., has franchise to distribute electricity in Spartanburg; as soon as franchises are secured at Landrum, Inman and Campobello, S. C., and Hendersonville, N. C., will begin construction of hydro-electric plant; water-power is on Green River near Saluda. (Previously reported incorporated with \$700,000 capital stock.)

N. C., Siler City.—Siler City Light & Telephone Co., capital stock \$17,500, incorporated; purchased site at Bean's Mill of Rocky River, three miles from Siler City, and will build hydro-electric plant; develop 40 to 50 horse-power at present, but total amount of power available is estimated at 150 horse-power; also contemplates acquiring Matthews Telephone Co.'s system and operate. J. Wade Siler, secretary-treasurer, advises will at once open bids for construction of timber dam; install equipment, including 50-kilowatt generator, and 25 miles of bare copper, standard weatherproof and covered copper wire. (See "Machinery Wanted.")

S. C., Spartanburg.—South Carolina Light, Power & Railway Co. proposes improvements to include increasing Gaston Shoals hydro-electric plant to 1200 horse-power and Spartanburg steam-power plant to 5000 horse-power; contemplates future development of power site on Broad River above Gaston Shoals, where 18,000 horse-power is available.

WATER-WORKS

Ark., Sulphur Springs.—City will expend \$25,000 to construct water-works and electric-light plant; water capacity 500,000 gallons per day; erect 15x15x12 foot brick and stone pump-house; also construct steel standpipe for 100,000 gallons or reinforced concrete reservoir of 150,000 gallons capacity; probably open bids in about 40 days; date not determined; A. C. Moore, engineer, Independent Bldg., Joplin, Mo. (See "Electric Plants" and "Machinery Wanted.")

Ark., Wynne.—City will make water-works improvements, including artesian well; Board of Commissioners receives proposals until 1.30 P. M. February 24; plans and specifications at office of C. B. Bailey, secretary Board of Commissioners, and at office of consulting engineers, R. C. Huston & Co., 630 Exchange Bldg., Memphis, Tenn., after February 10. (See "Machinery Wanted.")

Ky., Louisville.—Louisville Water Co. contemplates placing additional filter beds in water-works station at Crescent Hill; plans prepared.

La., Marksville.—City is considering \$30,000 bond issue to construct water-works and enlarge electric-light plant; T. T. Fields, Mayor.

Md., Baltimore.—City will construct 10 sluiceways and appurtenances at Loch Raven; plans on file in office of Water Engineer, City Hall; following quantities needed: Four 42x72-inch sluiceways and appurtenances; two 48-inch diameter and four 24-inch diameter sluiceways and appurtenances; additional items may be required, as 200 linear feet additional 3½-inch gate stems with couplings, 172 linear feet additional 2½-inch gate stems, 24 additional guides for 3½-inch stems and 8 additional guides for 2½-inch stems; bids received until February 12; Esra B. Whitman, Water Engineer; Jas. H. Preston, president Board of Awards. (See "Machinery Wanted.")

Mo., Jefferson City.—City is having plans prepared by Chester & Fleming, Union Bank Bldg., Pittsburgh, Pa., for installation of pumping machinery for water-works; bids will soon be invited by engineers.

Mo., Pittsburg.—Town contemplates constructing water and sewer systems estimated to cost \$23,000. Address Town Clerk.

N. C., Charlotte.—Board of Water Commissioners will lay 3500 feet of eight-inch water main and 575 feet of six-inch water main as laterals in East Boulevard between Avondale Ave. and city limits; bids received until February 6; W. E. Vest, superintendent. (See "Machinery Wanted.")

N. C., Cherryville.—City contemplates voting on \$15,000 bond issue to construct water-works, etc. Address The Mayor. (See "Electric Plants.")

N. C., Clayton.—City will construct water-works, electric-light plant and sewer system; water-works will consist of fireproof building, power pumps, clear-water basin and about four miles of 6, 8 and 10-inch water-pipe laying, with hydrants and valves; Gilbert C. White, engineer, Charlotte, N. C.; bids received until February 25. (See "Machinery Wanted.")

S. C., McCall.—City contemplates, it is reported, voting on water-works bond issue. Address The Mayor.

Tenn., Lonsdale, R. Sta., Knoxville.—H. E. Christenbury, Mayor, states city (recently noted petitioning for authority to issue bonds) now has water-works; proposed issue is for retirement bonds. (See "Road and Street Work.")

Tex., Crystal City.—City, W. B. Guillauden, Sr., Mayor, contemplates expending \$21,000 on water-works construction; 100,000-gallon tower tank (now receiving prices); date of opening construction bids not set. (Bond issue previously noted.)

Tex., Longview.—City contemplates constructing water system to replace private plant now in use; will probably soon vote on \$100,000 bond issue; M. L. Cunningham, City Attorney.

Tex., New Boston.—City will construct water-works; daily capacity, 100,000 gallons; cost, \$15,000; plans not determined; O. B. Pirkey, Mayor. (Recently noted as to vote February 25 on \$15,000 bond issue.)

Tex., Paint Rock.—Concho Water-Works Co. (J. W. Norman and others), Concho, Tex., will install water plant and lay distributing system.

Tex., Paris.—City voted February 4 on bond issue of \$40,000 for water-works improvements; Ed. H. McCulston, Mayor. (Recently noted.)

Tex., San Antonio.—City will probably soon vote on purchase of San Antonio Water Supply Co.'s plant. Address The Mayor.

Va., Ashland.—Town defeated \$50,000 bond issue to construct water-works and sewer system. Address Town Clerk. (Recently incorrectly reported to have voted bonds.)

Va., Bridgewater.—City votes February 21 on \$25,000 bond issue for water-works and sewer system; Otis W. Wine, chairman of finance committee.

Va., Portsmouth.—Portsmouth Suburban Water Co. filed deed of trust to secure \$2,000,000 bond issue for extensions and improvements to plant and for refunding previous bond issues.

Va., Roanoke.—Vinton-Roanoke Water Co., National Exchange Bank Bldg., will expend \$15,000 to construct dam across Beaver Dam Creek to create storage reservoir.

Va., Rocky Mount.—City has engaged J. L. Ludlow of Winston-Salem, N. C., as engineer in charge of constructing water-works; cost \$50,000; date of opening bids not set; C. S. Greer, Mayor. (Recently noted.)

WOODWORKING PLANTS

Ark., Gould.—Cooperage.—Gould Cooperage & Lumber Co., capital stock \$25,000, incorporated by W. T. Leatherman, H. R. Huntington, A. D. Maus and Lily Maus.

Ky., Paducah.—Boxes.—Lucas Land & Lumber Co. purchased (for \$50,000) plant of Mergenthaler-Horton Basket Co.; will utilize for manufacture of boxes.

La., Hammond.—Crates.—C. L. Kelly, Grand Rapids, Mich. (recently noted contemplating establishment of crate factory), states plans not completed and location at Hammond not certain.

La., New Orleans.—Refrigerators, etc.—National Refrigerator & Fixture Co., capital stock \$6000, incorporated; Henry Wendel, Sr., president; John G. Wendel, vice-president; Louis A. Wendel, secretary-treasurer.

Md., Baltimore.—Wagons.—Peters Carriage and Wagon Works, 418-20 Ensor St., will build addition at 412 East St.; one story; brick; 24x52 feet; Maryland Construction Co., 1315 Continental Bldg., Baltimore, will supervise construction.

Mo., St. Louis.—Chairs.—St. Louis Chair Co., capital stock \$5000, incorporated by W. W. Ellerbrake, H. F. Bente and William Ellerbrake.

N. C., Mebane.—Furniture.—White Furniture Co., W. E. White, president, has not selected architect to prepare plans for addition to plant; 60x200 feet; three stories and basement; concrete construction; elevator; install electric motors for light woodwork-machinery. (Recently noted.)

S. C., Spartanburg.—Wagons.—Dunbar Bros. will erect three-story brick building to be equipped for manufacturing wagons.

Va., Newport News.—Carriages and Wagons. R. L. Mason of Hampton, Va., awarded contract to G. W. Whitley to erect building; will be equipped and occupied by H. C. Hudson as carriage and wagon factory.

BURNED

Ala., Decatur.—Postoffice building; loss \$4000 to \$5000.

Ala., Florence.—Two buildings owned by Mrs. George Young, loss \$15,000; building owned by Bliss estate and occupied by Bell Telephone Co., loss \$10,000.

Ark., Bigelow.—Jeff Forte's residence; loss \$4000.

Ala., Seale.—B. G. Jennings' store on North Main St.; loss \$15,000 to \$20,000.

Ark., Deval's Bluff.—E. B. Robinson's building; Mason estate's building; total loss \$11,000.

Ark., Little Rock.—R. H. Sessions' residence at 224 W. 24th St.; loss \$3000.

Ark., Russellville.—Van Boswell Bldg. at Jefferson and Russell Sts., occupied by J. M. Swilling.

Ga., Savannah.—Wharves and eight freight warehouses owned by Central of Georgia Railway (C. K. Lawrence, chief engineer) and leased to Merchants & Miners' Transportation Co. and others, loss to railroad estimated at \$600,000; Planters Rice Mill Co.'s plant, estimated loss, \$20,000; portion of freight storehouses of Seaboard Air Line Railway, W. D. Faucette, chief engineer, Portsmouth, Va.

Ga., Milledge.—J. W. & C. I. Hall's store; loss \$8000.

Ky., Louisville.—Bon-Ton Millinery Co.'s store at 814 W. Market St.; loss \$5000.

Md., Ellicott City.—Herbert Ridgely's residence near Ellicott; loss \$5000.

Md., Hagerstown.—Henson Building, on East Franklin St., occupied by F. F. Henson and others; loss several thousand dollars.

Md., Pikesville.—Mrs. Charles L. Nace's residence, Woodhome Ave., Mt. Wilson; loss \$5000.

Md., Washington Park (not a postoffice).—Washington Park amusement resort, owned by Samuel Bensinger, 1717 20th St. N. W., Washington, D. C.; loss \$30,000.

Miss., Heidelberg.—Clayton & Co.'s store; loss \$5000.

Mo., Pittsburg.—John Akins' feed store at 114 E. 5th St.; loss on building, \$9000.

Mo., St. Louis.—Non-Royalty Shoe Co.'s plant at 2201 Pine St.; building owned by Frank A. Ruf, 5863 Cabanne Ave.; loss on stock and machinery estimated at \$65,000 and on building at \$20,000.

N. C., Olympia, R. F. D. from Newbern.—Building owned by Charitable Brotherhood Lodge.

Md., Rossville.—C. Ross Mace's residence; loss \$1000.

Miss., Hattiesburg.—W. F. Hewitt's residence at Hill Ave. and Charles St.; loss \$5000.

Mo., Fulton.—Montgomery-Bell Dry Goods

Co.'s store; building owned by J. W. Pratt; loss \$5000.

Okl., Coalgate.—Dan Rogers' residence.

Okl., Paul's Valley.—W. M. Freeman's store; loss \$50,000.

S. C., Aiken.—Park-in-the-Pines Hotel, owned by Mrs. McArthur, Detroit, Mich.; A. R. Dick, manager; loss about \$100,000.

S. C., Cheraw.—Dwelling on old Power plantation, owned by C. L. Moore estate.

S. C., Cartersville.—George G. Palmer Company's department store; loss \$10,000.

Tenn., Tullahoma.—Rock Creek Baptist Church. Address The Pastor, Rock Creek Baptist Church.

Tex., Abilene.—Walker-Smith Wholesale Grocery Co.'s building.

Tex., Dallas.—Building at 217 N. Central Ave., owned by Harry Williams and occupied by Frank Meternaga; loss \$3500.

Tex., Gainesville.—Dan Garner's residence; loss \$3500.

Tex., Lassater.—Dr. W. R. Smith's store; Mrs. Hawcroft's store.

Tex., Rockdale.—City Pantitorium, H. H. Coffield, proprietor; loss \$4000.

Tex., Terrell.—Frank Hopkins' residence; loss \$10,000.

Va., Richmond.—Johnston Box Co.'s plant at 2502 Venable St.; estimated loss, \$7000.

Tex., Temple.—A. L. Beasley's residence; loss \$3000.

Va., Shenandoah.—Koontz & Rothgeb's bakery.

W. Va., Grafton.—Robert Anderson's blacksmith shop; J. L. Arnett's feed store; loss \$6000.

W. Va., Huntington.—Homrich Bldg., owned by H. J. Homrich and occupied by Paul Doherty and others; loss \$12,000.

W. Va., Weston.—Weston Crescent Window Glass Co.'s old plant; also packing and storage house; loss, \$45,000.

ings Bank Bldg., Washington, for office building at 14th and H Sts.; 11 stories, with basement; first three stories faced with marble, remainder with terra-cotta; two rapid-transit electric elevators; cost \$250,000 to \$300,000. (Previously noted.)

Fla., Bartow.—Polk County National Bank will erect 26x30-foot addition to present building; ordinary brick construction; metal roof; burglar-proof vault, fireproof vault and safety deposit vault. (Recently noted.)

Fla., St. Petersburg.—L. C. Hefner will erect office building to replace present store building.

Ga., Moultrie.—Commercial Investment Co., R. J. Corbett, director, will erect office and store building; four stories; 125x130 feet; mill construction. (See "Machinery Wanted.")

Ga., Waycross.—J. R. and T. Bunn are having plans prepared for office building at Jane and Tebeau Sts.; brick and steel; five or seven stories.

Md., Frederick.—John B. Hamme, York, Pa., is preparing plans for building for trust company; 54x125 feet; cost \$50,000.

Miss., Meridian.—Meridian Board of Trade will increase capital stock from \$5000 to \$15,000 and remodel Board of Trade and Cotton Exchange building, etc.; plan is to erect one or two additional stories, etc.; George S. Willham, chairman of building committee.

Tenn., Memphis.—Germania Savings Bank & Trust Co. purchased building at northeast corner of Madison Ave. and 2d St. for \$125,000 and will remodel into four-story bank and office building at cost of \$25,000; is having plans prepared by Price, Broadwell & Mahan, Falls Bldg., Memphis.

Tex., Cuero.—First State Bank & Trust Co. will expend \$5000 for improvements to bank building, including exterior and interior alterations, installation of brass and marble fixtures, etc.

Tex., Orange.—Mrs. Henry J. Litcher will, it is reported, erect office, store and theater building. (See "Theaters.")

Tex., Palestine.—Royal National Bank will remodel interior of bank building, install marble and bronze fittings, etc.

Tex., Petty.—A. Collier is interested in erecting bank, store and office building; 50x150 feet; brick.

Tex., Sealy.—Citizens' State Bank will erect bank building at Main and Fowlkes Sts.

W. Va., Wheeling.—Edward Bates Franzheim, Wheeling, prepared plans to remodel McLean block at 12th and Market Sts. for office building.

W. Va., Wheeling.—Security Trust Co. acquired site at 114-13 Market St. and will erect bank building.

CHURCHES

Ala., Birmingham.—St. James' Colored Baptist Church will erect brick-veneer edifice at Sixth Ave. and 10th St.; cost \$10,000. Address The Pastor, St. James' Colored Baptist Church.

Ala., Birmingham.—Methodist Protestant Church will erect edifice at First Ave. and Cherry St.; brick veneer; cost \$5000. Address The Pastor, Methodist Protestant Church.

Ala., Gadsden.—Cumberland Presbyterian Church, Rev. S. N. Milligan, pastor, will erect edifice.

Ark., Helena.—Congregation Temple Beth-El plans to erect temple. Address The Rabbi, Congregation Temple Beth-El.

Fla., Miami.—First Methodist Episcopal Church South, Rev. Dr. Davis, pastor, plans to erect edifice at cost \$30,000.

Ga., Cordele.—Rev. J. H. Cain, pastor First Baptist Church, states plans to erect edifice are not definite. (Recently noted.)

Ga., Hawkinsville.—Baptist Church, Rev. C. L. Graves, pastor, will erect Sunday-school building; bungalow style.

Ga., Macon.—Vineville Ave. Baptist Church, Rev. J. L. White, pastor, will erect edifice; 72x150 feet; cost \$40,000; bids opened February 15; architect not selected; F. L. Mallory may be addressed. (Recently noted at Vineville, Ga.)

La., Paradise.—Lafayette Presbyterian Church, Rev. J. C. Barr, pastor, New Orleans, La., will erect edifice.

Md., Grantsville.—Lutheran congregation, H. C. Bonig, secretary building committee, soon opens bids to erect edifice; 44x54 feet; brick; slate or asbestos roof; hot-air heat; lighting not decided; cost \$7000. (Recently noted.)

Md., Catonsville.—Catonsville Presbyterian Church is having plans prepared by Walter M. Geske, 66 Gunther Bldg., Baltimore, Md., for interior improvements to edifice; will

refresco, install electric-lighting system and other minor improvements.

Mo., St. Louis.—Lindell Ave. Methodist Church, Rev. William Wirt King, pastor, 4112 Lindell Blvd., receives bids in about a week to remove and rebuild edifice; 97x180 feet; stone; tile and slate roof; F. C. Bonsack, Pierce Bldg., St. Louis, is architect. (Recently noted.)

Mo., St. Louis.—German Evangelical Bethania congregation, Rev. F. H. Kraft, pastor, will erect edifice at Red Bud and Rosalie Aves.; site 160x147 feet.

N. C., Clayton.—First Baptist Church will erect edifice; cost \$25,000; E. L. Hinton, chairman of committee.

N. C., Forest City.—Baptist church plans to remodel present edifice or erect new structure. Address The Pastor, Baptist Church.

N. C., Winston-Salem.—First Methodist Protestant Church is having plans prepared by Willard C. Northrup, Winston-Salem, for rebuilding edifice at Liberty and 7th Sts.; 14 Sunday-school rooms, separated from main auditorium by rolling partitions; will erect addition 13x46 feet; total seating capacity 500; provide new galleries on east and west wings, etc.; colonial style.

Tenn., Memphis.—Park Ave. Christian Church, Rev. J. L. Keever, pastor, will erect edifice at Park Ave. and Gay St.; cost \$40,000.

Tex., Temple.—Memorial Baptist Church, Rev. H. Carroll Smith, pastor, will expend \$13,000 to erect edifice; 75x75 feet; brick; proposals may be addressed to R. L. Barclay, chairman of building committee. (Recently noted.)

Tex., Abilene.—North Park Baptist Church, Rev. J. C. Burkett, pastor, will enlarge edifice to increase seating capacity 100.

Tex., Blossom.—Old School Presbyterian Church will erect edifice. Address The Pastor, Old School Presbyterian Church.

Tex., Houston.—Woodland Heights Methodist Church, E. C. Lamb, chairman of building committee, will erect edifice; cost \$10,000. (See "Machinery Wanted.")

Tex., Paris.—Christian church, Rev. J. T. Ogle, pastor, accepted plans by J. E. Greene, Columbia, Miss., for edifice; cost \$20,000 to \$30,000.

Tex., San Antonio.—McKinley Ave. Methodist Episcopal Church will erect edifice on S. Presa St.; cost \$15,000. Address The Pastor, McKinley Ave. Methodist Episcopal Church.

Tex., Snyder.—Methodist Church, Rev. J. W. Hunt, pastor, will erect edifice; cost \$16,000.

Tex., Terrell.—Church of Christ contemplates erecting edifice. Address The Pastor, Church of Christ.

Va., Berkeley, Station Norfolk.—First Christian Church is having plans prepared to remodel front of edifice and provide additional Sunday-school rooms; plans call for English style front; second floor with rolling partitions; stained-glass windows; cost about \$3000. Address The Pastor, First Christian Church.

Va., Petersburg.—Congregation of Brith Achem, Rev. S. D. Meyers, rabbi, 18 N. Market St., opens bids in about a month to erect synagogue; 40x60 feet; ordinary brick construction; cost \$6000 to \$8000. (Recently noted.)

Va., Portsmouth.—Central Methodist Episcopal Church, Rev. G. T. Forrester, pastor, will erect Sunday-school building; cost \$10,000.

W. Va., Eccles.—New River Collieries Co. will erect Catholic church for employees.

W. Va., Warwood.—Catholic congregation will erect edifice; Rev. P. J. Donahue, bishop.

W. Va., Warwood.—Lutheran Church will erect edifice on Main St., Center Warwood. Address The Pastor, Lutheran Church.

CITY AND COUNTY

Ala., Mobile.—Library and Auditorium.—City is reported to have purchased site bounded by Spring Hill Ave., St. Francis and Wilkinson Sts. and as to erect combination auditorium and library; Laz Schwarz, Mayor. (Recently noted as planning to erect \$50,000 Carnegie Library.)

Fla., St. Petersburg.—Library.—City contemplates erecting library; cost \$40,000. Address The Mayor.

Ga., Atlanta.—Comfort Station.—City is considering erection of two comfort stations facing on Whitehall St., one on each side of viaduct; two stories; cost about \$10,000 each. Address The Mayor.

Ga., Valdosta.—Library.—City has plans by Bishop & Greer, Valdosta, for Carnegie Li-

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES.

Ala., Birmingham.—Louis V. Clark will erect apartment-house at 20th St. and Park Ave.; four stories.

Ala., Birmingham.—A. C. Howze is having plans prepared by Edgar L. Love for apartment-house at 27th St. and 7th Al.; three stories and basement; brick and concrete; cost \$50,000.

Fla., Miami.—George A. Persch will erect apartment-house on 9th St. near Ave. C; three stories; solid reinforced concrete; 29 apartments, each with private bath and individual kitchen; porches 12 feet wide at front and left side of structure on two lower stories; cost \$40,000; construction to begin about March 1; plans by August Geiger, Miami.

Ga., Atlanta.—C. Shelverton will erect apartment-house on 11th St.; three stories; brick; 65x192 feet; 90 rooms; 24 apartments; mill construction; vapor heat; freight hand-power elevator; tar and gravel roof; cost \$61,500; plans by L. R. Wilburn, Atlanta; construction by owner.

Ga., Atlanta.—Fitzhugh Knox will expend \$30,000 to erect apartment-house; 200x50 feet; ordinary construction; steam heat; composition roof; plans by Walker & Chase; day labor. (Recently noted.)

Ky., Louisville.—B. H. Farnoly opens bids about April 15 to erect proposed apartment-house; 150x124 feet; fireproof construction; steam heat; electric passenger elevator; composition roof; cost \$200,000; plans by Brinton B. Davis, 1309 Inter-Southern Bldg., Louisville; laundry equipment, etc.

Mo., St. Louis.—H. W. Hamilton will erect flats or dwellings. (See "Dwellings.")

Mo., St. Louis.—Theodore L. Degenhardt will erect two-story tenement-house at 3731 Louisiana St.; cost \$4500.

Mo., St. Louis.—Frank Knapstein will erect two-story tenement-house at 3232 S. Dakota St.; cost \$4500.

Mo., St. Louis.—DeSoto Investment Co. will erect three-story tenement-house at 5654 Delmar Blvd.; cost \$30,000.

Mo., St. Louis.—Jacob Reith will erect two-story tenement-house at 2802 Missouri St.; cost \$3400.

Mo., St. Louis.—Ernest J. Hess will erect two two-story tenement-houses at 3619-21 Michigan Ave.; cost \$6000.

Mo., St. Louis.—Edward Medler will erect store and apartment building. (See "Stores.")

Mo., St. Louis.—Albert Kobermann will erect two two-story tenement-houses at 3025-29 Hydraulic St.; cost \$5000.

Mo., St. Louis.—Herman Buettcher will erect two-story apartment-house at 3846-48 McDonald St.; cost \$5500.

Tenn., Lebanon.—L. P. Ogden, Beaumont, Tex., purchased site at Main and South College Sts. and will, it is reported, erect Louise Apartments; cost \$25,000.

Tenn., Memphis.—Speedway Terrace Co. will erect two-story brick flat at 1118 Tutwiler Ave.; cost \$5000.

Tenn., Nashville.—A. S. Weinbaum will erect 12-suite apartment-house in west end of block bounded by 25th, Elliston, Twenty-sixth Aves. and Centennial Park.

Tex., Houston.—Dr. J. T. Glaze is having plans prepared by O. H. P. Rudesill & Son, 508 1/2 Travis St., Houston, for apartment-house.

Va., Roanoke.—M. C. Franklin will expend \$10,000 to erect apartment-house; 42x60 feet; ordinary brick and wood construction; steam heat; electric lighting; slate and tin roof; plans and construction by owner. Mr. Franklin and S. Y. Sweeney recently reported as having plans prepared for converting two dwellings into apartment-house. (See "Machinery Wanted.")

Va., Richmond.—C. W. and J. Lee Davis will erect three two-story brick tenement-houses on Stuart Ave. between Addison and Elm Sts.; cost \$30,000.

ASSOCIATION AND FRATERNAL

Ala., Talladega.—L. J. Wright, chairman of Masonic Building Fund Committee, will receive bids until February 10 to erect two-story brick building for Masonic Temple; plans and specifications at office of Hanks Mercantile Co., Talladega.

Fla., St. Petersburg.—Woman's Town Improvement Association accepted plans by Mr. Benjamin for building on First Ave. North; two stories; probably brick; hot-air heat; electric wiring; gas fixtures; assembly hall 35x58 feet, etc. (Recently noted.)

Fla., Tampa.—Knights of Pythias open bids at office of Bonfoey & Elliott, architects, Tampa, February 6 to erect building at Lafayette and Morgan Sts.; three and a half stories; shower and tub baths; brick construction; cost \$22,000.

Ky., Louisville.—Louisville Turngemeinde plans to erect building; Theodore Ahrens, Phil Hollenbach and others, committee.

N. C., Charlotte.—Young Women's Christian Association has plans by Hook & Rogers, Charlotte, for association building; cost \$60,000. (Previously noted.)

Tex., Hillsboro.—Elks' Building Association is having plans prepared by C. D. Hill & Co., Dallas, Tex., for lodge and opera-house building for Benevolent Protective Order of Elks; cost \$30,000.

Tex., Waxahachie.—Benevolent Protective Order of Elks will erect building; brick veneer; cost \$25,000.

Va., Portsmouth.—Young Men's Christian Association is having plans prepared by Louis E. Jallade, 37 Liberty St., New York, for building on King St. to contain gymnasium, swimming pool, bowling alleys, etc.

Va., Richmond.—Young Women's Christian Association has plans for building on 5th St., and is reported as receiving building bids. (Previously noted.)

BANK AND OFFICE

Ala., Decatur.—Title Abstract Co. of Alabama, F. E. Littlefield, president, succeeds Morgan County Abstract Co.; will remodel building.

Ala., Foley.—Society of Equity is reported as planning to erect office and warehouse building.

Ark., Hoxie.—Harry W. Boas is having plans prepared for office and store building. (See "Stores.")

Ark., Walcott.—T. Cothem will rebuild office building; plans not determined. (Recently reported burned.)

D. C., Washington.—Real Estate Trust Co., H. Bradley Davidson, president, F St., adjoining Willard Hotel, approved revised plans by Milburn, Heister & Co., Union Sav-

brary; limestone, pressed brick and terra-cotta; copper roof; steam heat; contractors may obtain plans upon deposit of \$5. (Previously noted.)

Ky., Louisville.—Library.—Trustees of Louisville Free Public Library are having plans prepared by Frederick Erhart, Norton Bldg., Louisville, for Eastern Colored Branch Library at Hancock and Lampton Sts. (Recently noted.)

La., New Orleans.—Fire Station.—City opened bids to erect central fire station; John Minot, New Orleans, is lowest bidder at \$62,950. (Recently noted.)

La., Shreveport.—Market.—City will vote March 4 on \$150,000 bond issue for market-house. Address The Mayor. (Recently noted.)

N. C., Bismarck.—County Home.—Iredell County Commissioners will open bids in 30 days to erect county home; seven buildings in all; two-story, 75x130 feet; two-story, 52x112 feet; one-story-and-basement, 45x70 feet; two one-story, 32x40 feet, and two one-story, 27x27 feet; ordinary construction; central steam plant; electric lighting; slate roof; plans by Wheeler & Stern, Charlotte, N. C., to whom proposals may be addressed. (Recently noted to cost \$25,000.)

Okl., Muskogee.—Library.—City will receive bids until March 10 to erect Carnegie library. Address The Mayor.

Tenn., Nashville.—Armory and Auditorium.—City will petition Legislature for authority to issue \$250,000 of bonds to erect combined armory and auditorium, for which C. K. Colley, Nashville, prepared plans; plans include structure 200x300 feet; three stories and basement; to contain lockers, baths, rifle range, gymnasium, auditorium to seat 10,000, gallery to seat 2000, and smaller hall to seat 500; Hillery E. Howse, Mayor.

Tex., Dallas.—City Hall.—City opened bids to erect city hall at Main, Harwood and Commerce Sts.; Steinger-Taylor Construction Co., St. Louis, Mo., is lowest bidder at \$397,345; plans by C. D. Hill & Co., Dallas, Tex.; four stories, basement and sub-basement; granite, stone, terra-cotta and brick; fireproof construction; elevators; provision for two additional stories later; Mauran, Russell & Crowell, consulting architects, St. Louis, Mo.

Tex., De Leon.—City Hall.—City has plans for city hall; 50x75 feet; two stories; construction to begin March 1.

Tex., Denison.—Hospital.—J. D. Yocom, City Secretary, opens bids February 12 (postponed date) to erect fireproof hospital; two stories and basement; direct and indirect steam heat; pitch and gravel roof; cost \$20,000; plans by J. O. Parr, Oklahoma City, Okla. (Recently noted.)

Tex., Temple.—Fire Station.—City will vote in April on \$15,000 bond issue for fire-department equipment and stations. Address The Mayor.

Va., Petersburg.—Jail.—Dinwiddie County Commissioners will erect \$7000 jail.

W. Va., Wheeling.—Infirmary.—Ohio County Commissioners will improve county farm; repair building, erect new parts, construct roads, etc.

COURTHOUSES

N. C., Durham.—Durham county will consider plans by W. C. Lewman, Louisville, Ky., for improvements to courthouse; plan is to erect additional story, make courtroom noiseproof, etc.

DWELLINGS

Ala., Birmingham.—A. R. Dearborn & Co. is erecting 15 two-story dwellings on Sixteenth Ave. between 17th and 18th Sts. South; cost \$60,000.

Ala., Birmingham.—C. N. Street will erect two two-story frame dwellings on 13th St. between Tenth and Eleventh Aves.; cost \$3000.

Ala., Tuscaloosa.—Dr. George J. Davis will erect bungalow.

Ark., Little Rock.—Bracy, Beauchamp & Nelmyer Realty Co. will erect two one-story frame cottages at 323 Johnson St. and 1221 W. 29th St., and two-story frame dwelling at 2312 Summit Ave.; cost \$8750.

D. C., Washington.—G. S. Gruver, Union Trust Bldg., will erect four two-story brick dwellings at 922 to 928 Shepherd St. N. W.; cost \$10,000; 20x30 feet; hot-water heat; electric lighting; slag or felt roof.

D. C., Washington.—M. Fetterman, 701 H St. N. E., will repair store and dwelling. (See "Stores.")

D. C., Washington.—Harry A. Kite, 1333 G St. N. W., will erect three two-story brick dwellings at 319-23 T St. N. W. and two-story frame dwelling at 3313 Ross Pl. N. W.; 20x31 feet; ordinary construction; hot-air heat; electric lighting; slag roof; plans by

Albert E. Landvoight, 1301 G St. N. W., Washington; construction by owner.

D. C., Washington.—Harry Wardman, 1342 New York Ave. N. W., will erect 12 dwellings on Harvard and Hobart Sts.; six rooms and bath each.

Fla., Jacksonville.—W. A. Drake opens bids February 25 to erect dwelling at Ostega, Fla.; two stories; frame; stucco; shingle outside; hot-water heat; gas and electric lighting; cost \$7000; plans by W. B. Camp, Jacksonville.

Fla., Jacksonville.—Brown Realty Co. will erect two two-story frame dwellings on Post St. between Goodwin and Copeland Sts.; cost \$3000.

Fla., Jacksonville.—Duval Mattress Manufacturing Co. will erect two-story frame dwelling on Nooncy Ave. between Smith and Grant Sts.; cost \$3000.

Fla., Tampa.—Christian Church will erect dwelling; cost \$3000. Address The Pastor, Christian Church.

Fla., Tampa.—M. Sanchez will erect \$1000 dwelling.

Ga., Atlanta.—McKenzie Foust Co. will erect dwelling; two stories; brick-veneer; cost \$7000; day labor.

Ga., Atlanta.—Adair & Weinmeister will erect six one-story frame dwellings at 86, 89, 94, 98, 102, 106 Brookline St.; total cost \$9000; day labor.

Ga., Atlanta.—Mrs. Mary Ella Eason will erect building on Elmore Pl.

Ga., Atlanta.—A. J. Paxton, Jr., will erect \$4500 residence.

Ga., Valdosta.—Dr. J. C. Wilson has plans by Bishop & Greer, Valdosta, for dwelling; frame; tile porch and bathrooms; hardwood floors; cost \$3000.

Ky., Louisville.—H. G. Schaaf will erect three frame cottages at 422-26 W. M St.; total cost, \$3300.

Ky., Middlesboro.—J. A. Thompson is receiving bids to erect dwelling and store. (See "Stores.")

La., New Orleans.—George H. Davis, president of American Cities Co., will erect residence on St. Charles Ave. near Walnut St.

La., New Orleans.—Harry Otis will erect residence.

La., New Orleans.—Edward H. Kemp of Whitney-Central National Bank will erect residence facing Audubon Park.

La., New Orleans.—Charles B. Thorne will erect residence.

La., New Orleans.—Eugene H. Roberts, president of Bank of Orleans, will erect residence.

La., New Orleans.—Moses Hollander will erect two-story residence on St. Mary St.; cost \$3200.

La., New Orleans.—Crescent Building and Loan Association will erect single cottage on Camp St.; cost \$3300.

La., New Orleans.—Jules Dreyfous will erect seven double cottages in Reynes St.; cost \$7000.

La., New Orleans.—Metropolitan Building Co. will erect two residences on Robert St.; two stories; cost \$5000.

Md., Baltimore.—Clayton B. Long, 1115 Madison Ave., will erect residence on Strathmore Ave., Ailsa Ter.; plans prepared.

Md., Baltimore.—Alcorde Realty Co., Philip S. Morgan, secretary, N. E. corner St. Paul and Saratoga Sts., will erect 11 dwellings on Poplar Grove St.; frontage of 21 feet; two stories.

Md., Baltimore.—James Keely, Edmondson Ave. and Ashburton St., will erect 17 two-story dwellings in 2000 block Edmondson Ave. and eight on Ashburton St. north of Edmondson Ave.; iron-spot brick front; marble trimmings.

Md., Baltimore.—John T. Donohue, 1808 Thames St., has plans by M. R. Stone, 2414 Arunah Ave., Baltimore, for 22 dwellings on west side of Ellwood Ave. near Falt Ave.; two stories; brick; hot-air heat; 20 13.6x45 feet and two 15x50 feet; cost \$26,000; also purchased site 300x70 feet at Linwood Ave. and Foster St. and will erect number of two-story dwellings.

Md., Baltimore.—Piel Construction Co., 2519 Edmondson Ave., will erect 70 dwellings; cottage plan; ordinary steel frame construction; steam heat; gas and electric lighting; slag roof; cost \$200,000; plans and construction by owner.

Md., Baltimore.—Miss Lily H. Buchanan, 18 E. Eager St., will erect residence on Lake Ave. between Roland Ave. and Falls Rd.

Mo., Kansas City.—W. E. Judkins will erect stucco dwelling at 417 29th St. Ter.; cost \$5000.

Mo., Kansas City.—H. E. Colvin will erect

stucco dwellings at 2312 Askew St. and 3500 E. 29th St. and frame dwelling at 3504 E. 29th St.; cost \$2000 each.

Mo., Kansas City.—O'Hearn Bros. will erect stucco and stone veneer dwellings at 3923 and 3921 Paseo St.; cost \$3000 each.

Mo., Kansas City.—C. D. Bramwell will erect stucco dwelling at 932 W. 32d St.; cost \$3000.

Mo., Kansas City.—Frank W. Baker will erect two stone veneer and one stucco dwelling at 203, 217 and 204 W. 62d Ter.; cost \$4000 each.

Mo., St. Louis.—H. W. Hamilton will erect flats or dwellings on Ashland School property at Newstead and Sacramento Aves.

Mo., St. Louis.—Harry B. White will erect two one-story dwellings at 3834-36 Cottage St.; cost \$3000.

Mo., St. Louis.—L. H. Levy will erect three-story dwelling at 5826 Waterman St.; cost \$5000.

Mo., St. Louis.—Alaska Heights Realty Co. will erect number of dwellings on Hickory St.

Mo., St. Louis.—William P. Sharkey purchased site on Castleman Ave. and will, it is reported, erect dwelling.

Mo., St. Louis.—F. E. Nulsen purchased 14½ acres of land at Bluff Springs and will, it is reported, erect summer residence and bathhouse.

Mo., St. Louis.—Elmhurst Real Estate Co. will erect three one-story dwellings at 2921, 2925 and 3032 Winnebago St.; total cost \$5100.

Mo., St. Louis.—S. W. Williams will, it is reported, erect dwelling on Harter Ave. in Forest Park Heights.

Mo., St. Louis.—Robert J. Manley will erect bungalow on Lee Ave.

N. C., Asheville.—C. G. Meminger, Lake-land, Fla., is reported as to erect \$50,000 residence.

N. C., Forest City.—J. F. Alexander will erect residence on E. Main St.; cost \$12,000 to \$15,000.

N. C., Lumberton.—W. O. Thompson will erect residence; two stories; nine rooms.

Okl., Chickasha.—Mrs. J. S. Blackmon has plans by Harold Macklin, Chickasha, for residence at 13th and Kansas Ave.; California bungalow style; nine rooms and bath; foundation and terrace of native limestone; wood superstructure; concrete porch floors.

S. C., Ehrhardt.—F. P. Wichman, care of Ehrhardt Hardware Co., will erect six-room dwelling; grates; acetylene lighting; metal shingle roof; bids opened February 1. (See "Machinery Wanted.")

S. C., Laurens.—First Baptist Church will erect parsonage. Address The Pastor, First Baptist Church.

Tenn., Chattanooga.—John Edgeman will erect residence in Avondale.

Tenn., Lebanon.—Walter S. Page will erect \$4000 brick residence on E. Main St.

Tenn., Shelbyville.—Ben Hoover will erect residence.

Tex., Bloomington.—J. W. Brown will erect residence.

Tex., Dallas.—Sears, Roebuck & Co. of Texas, Elmer L. Scott, manager, purchased tract in Oak Cliff and are reported as to finance erection of dwellings for company's department managers; reported cost \$40,000.

Tex., El Paso.—Mayfield Realty Co. will erect 44 dwellings in Bassett Addition; awarded contract for 400 feet of cement sidewalks; total cost of construction, \$132,000.

Tenn., Nashville.—Mrs. Louella Thompson will erect brick veneered dwelling at 812 Seventeenth Ave. South; cost \$3000.

Tex., Caldwell.—H. Lieberman will erect residence.

Tex., Cuero.—W. B. Grizzard will erect residence.

Tex., El Paso.—Vance Stewart has plans by Gibson & Robertson for bungalow in Grand View; five rooms; brick, with stucco finish; cost \$4000.

Tex., Kaufman.—J. R. Gillespie will erect brick residence; cost \$10,000.

Tex., San Antonio.—Mrs. G. Wood will erect two-story dwelling on E. Washington Pl.; cost \$5000.

Tex., San Antonio.—J. W. Etter and G. A. Meyer will erect two-story dwelling on W. Craig Pl.; cost \$3300.

Tex., Temple.—H. C. Glenn will erect \$8000 residence.

Tex., Temple.—A. D. Dyess will erect \$7500 residence.

Tex., Temple.—John A. Green will erect residence; cost \$5000.

Tex., Temple.—C. L. Walker will erect \$5000 residence.

Tex., Waco.—O. I. Halbert will rebuild dwelling; 14 rooms; ordinary construction; grates; arc lights; shingle roof; cost \$8000; plans by W. Smith; contract let January 27. (Recently reported burned.)

Tex., Yoakum.—F. Morgenthal will erect residence on Gonzales St.; two stories; nine rooms; also contemplates erecting brick cottage on same street.

Va., Norfolk.—Rufus Parks opened bids to erect residence in Stockley Gardens; brick and tile; John T. Lenoir, Norfolk, Va., lowest bidder at \$9713.

Va., Tazewell.—A. G. Russell is reported as to erect residence.

Va., Tazewell.—J. P. Royall will, it is reported, erect residence.

Va., Tazewell.—A. S. Higginbotham will, it is reported, erect residence.

W. Va., Warwood.—C. P. Doty will erect residence on 16th St.

W. Va., Warwood.—E. D. Grium will erect residence on 16th St.

W. Va., Wheeling.—A. G. Craft, Triadelphia, W. Va., will erect residence at Woodsdale; cost \$4000.

GOVERNMENT AND STATE

Ark., Hot Springs.—Nurses' Home.—Consulting Quartermaster will receive bids until February 27 to construct Nurse Corps Home, including heating, electric wiring, fixtures, etc., at Army and Navy General Hospital; information on application.

D. C., Washington.—Lincoln Memorial.—President William H. Taft approved bill providing for erection of Greek temple on banks of Potomac River as memorial to Abraham Lincoln at cost of \$2,000,000. (Lincoln Memorial Commission, previously noted as having commissioned Henry Bacon, 160 Fifth Ave., New York, to prepare plans.)

La., New Orleans.—Postoffice.—Treasury Department, office of Supervising Architect, Oscar Wenderoth, Washington, D. C. Proposals received until March 13 for interior finish of United States postoffice and courthouse; drawings and specifications obtainable at this office or at office of architects, Hale & Rogers, 11 E. 24th St., New York, at discretion of Supervising Architect, or from Government superintendent of construction, United States postoffice, New Orleans, La.

Md., Cambridge.—Hospital.—Board of managers of Eastern Shore State Hospital authorized committee composed of Gov. Phillips Lee Goldsborough, Annapolis, Md., and others to select adviser to draw specifications for building on Absco farm and obtain plans from Maryland architects; has \$165,000 appropriation. (Previously noted.)

Md., Sykesville.—Hospital.—Managers of Maryland Hospital for Insane plan extensive improvements at Springfield, including erection of hospital building with capacity of 225 additional patients, cottage and completion of dining room, for which contract was previously noted awarded; cost \$170,000; Phillips Lee Goldsborough, Governor, Annapolis, Md.

Mo., Springfield.—Postoffice.—Treasury Department, Oscar Wenderoth, supervising architect, Washington, D. C., will receive bids until March 13 for extensions, etc., to postoffice, including plumbing, gaspiping, heating apparatus, electric conduits and wiring interior lighting fixtures and approaches; three stories and basement; 400 square feet ground area; first floor fireproof; exterior facing stone, with slate roof and repairs and alterations in present structure.

Tex., Fort Bliss.—Hospital.—Bids received until February 5 by Capt. A. P. Watts, Constructing Quartermaster, U. S. A., Fort Bliss, for material and erection of addition to post hospital.

Tex., Terrell.—Hospital.—Bids received until February 17 to furnish material and covering with metal shingles female and male annexes at North Texas Hospital for Insane; specifications on request.

Va., Lynchburg.—Epileptic Colony.—Virginia State Epileptic Colony, Dr. A. S. Priddy, superintendent, Madison Heights, Va., opens bids about May 1 to erect dormitories and dining-room for 100 patients; ordinary construction; brick and slate; Webster vapor system of heat; slate roof; cost, including heat and light, \$25,000; plans by Burnham & Cave, Lynchburg. (Previously noted.)

W. Va., Elkins.—Postoffice.—Treasury Department, Oscar Wenderoth, supervising architect, Washington, D. C., opened bids to erect postoffice; Volney E. Taylor, Huntington, W. Va., is lowest bidder for sandstone construction at \$75,895. (Previously noted.)

HOTELS

Ala., Montgomery.—N. J. Bell is reported as to erect hotel at Montgomery and Lee Sts.; has preliminary plans by Frederick Ausfeld, Montgomery; 150 rooms with private baths; stone, pressed brick and terracotta; summer theater on roof, which may be converted into palm garden and convention hall in winter with seating capacity of 800; electric fountain in lobby; telephones; electric elevators; fire escapes; conduit system of electric wiring; steam-heating system; vacuum cleaning system; mechanical equipment, toilets and billiard-rooms in basement; cost \$300,000.

Ark., Paragould.—N. B. Baird, Monroe, La.; J. O. Baird, Nashville, Tenn., and J. O. Baird, Lebanon, Tenn., will erect hotel on site of Ciner Restaurant, recently reported burned; cost \$30,000.

Ark., Bog Springs.—J. M. Johnson of Ashdown, Ark.; A. L. DuLaney and Dr. W. L. Shirley will erect hotel; 50 rooms.

Fla., Lakeland.—Bids opened at office of C. N. Clayton, cashier First National Bank, to erect five-story-and-basement fireproof hotel were rejected; plans by McIver & MacKay, Ocala, Fla. (Recently noted.)

Fla., Miami.—Lyman Lee Follette and Mark Spencer, both of Cardston, Alberta, Canada, purchased four lots on Ave. E between 10th and 11th Sts. and contemplate, it is reported, erecting hotel.

Ga., Waycross.—La Grande Hotel Co. will improve hotel; renovate structure, install telephones in all rooms, screens, etc.

Ky., Louisville.—Dr. Francis M. Payne of Payne's Hotel, 428 W. Chestnut St., purchased site 60x200 feet at 623-25 S. 5th St., and will, it is reported, erect hotel.

N. C., Raleigh.—W. N. Jones and J. W. Bailey will erect building on West Main St., of which two upper stories will contain 30 rooms, for Hotel Bland. (See "Stores.")

Tex., Lockhart.—Ed Masur is reported to have purchased interest of George W. Carter in Carter Hotel property and to make improvements.

Tex., Palestine.—Hyman Pearlstone, president of Young Men's Business League, and Dr. C. S. Bratton, chairman of hotel committee, are promoting erection of \$60,000 hotel on site 75x100 feet, which will be given as bonus to parties who will construct hotel.

Tex., Rockdale.—N. J. Alford will erect 14-room frame hotel near San Antonio & Aransas Pass passenger station.

Tex., Waco.—B. M. Goodman is having plans prepared by Edward H. Reed for hotel on 8th St. between Mary and Jackson Sts.; three stories; reinforced concrete; 55 rooms; 65x100 feet; I. H. Smith will be manager.

Va., Tazewell.—A. Z. Litz, Tazewell, and W. P. Payne, Bandy, Va., it is reported, plan to erect hotel on Main St.

Va., Richmond.—J. Lee Davis is reported as to erect hotel or store building to replace Davis Hotel on Main St.

MISCELLANEOUS

Ark., Imboden—Sheds, etc.—D. J. Landers Lumber Co., Springfield, Mo., will erect building for offices, stock, etc.; also erect lumber sheds.

Fla., Boca Grande—Casino, etc.—F. J. Kennard, Tampa, Fla., is preparing plans for combination casino and club building; cost \$18,000.

Fla., St. Petersburg—Clubhouse.—Men's Club, W. R. Rowland, attorney, will erect clubhouse; A. F. Lang, A. T. Blocker and T. W. Weston, committee.

Fla., Tampa—Clubhouse.—J. Lopez, president of Centro Asturiano Club, 2301 Nebraska St., will receive bids until February 25 to erect clubhouse; plans and specifications from Bonfoey & Elliott, architects, Tampa, on deposit of certified check for \$50. (Recently noted.)

La., Shreveport—Hospital.—Charles W. Owens, architect, Commercial National Bank Bldg., Shreveport, will receive bids until February 10, to be opened by board of trustees, for improvements and alterations at Charity Hospital, Texas Ave. and Murphy St.; plans and specifications at office of architect.

Md., Baltimore—Shed.—Carnegie Steel Co., Bush and Wicomco Sts., main office Pittsburgh, Pa., will erect shed at southwest corner Bush and Wicomco Sts.; one story; steel; 50x200 feet; cost \$7500; plans and construction by owner. (Other improvements recently noted under "Foundry and Machine Plants.")

Md., Baltimore—Hospital.—South Baltimore Eye, Ear, Nose and Throat Hospital,

1211 Light St., J. Barry Mahool, president, is having plans prepared by Herbert G. Jory, 1408 Munsey Bldg., Baltimore, for building; four stories and basement; colonial style; 60x100 feet; brick and stone; fireproof; cost \$50,000. (Previously noted.)

Miss., Jackson—Clubhouse.—Jackson City Club plans to erect clubhouse; cost \$75,000.

Mo., Kansas City—Institute.—Helping Hand Institute has plans for building in North End; brick; concrete construction; will inaugurate campaign to raise \$100,000.

Mo., St. Louis—Stables.—Charles Geraghty will erect addition to livery stables on Easton Ave.

Mo., St. Louis—Clubhouse.—Arcadia Country Club has plans for \$25,000 clubhouse on Lookout Hill.

Mo., St. Louis—Restaurant.—Kilpstein & Rathmann plan to rebuild four-story building at 604 Market St. to be occupied by John R. Thompson as restaurant; ornamental front; commissary and garage in rear; cost of improvements, \$30,000.

N. C., Burlington—Hospital.—Chamber of Commerce, J. W. Cates, secretary, is having plans prepared for hospital to cost \$20,000 to \$25,000.

N. C., Concord—Hospital.—Dr. J. E. Smoot is interested in plan to erect hospital.

N. C., Wilson—Hospital.—Wilson Sanatorium, W. T. Holden, business superintendent, plans to extend sanatorium buildings; proposes adding charity ward under control of Wilson Associated Charities, erection of building for colored patients, etc.

Okla., Chickasha—Hospital.—United Charities have plans by Harold Macklin, Chickasha, for proposed Good Samaritan Hospital at 9th and Texas Sts.; two stories; foundation and base to support additional story; cost \$30,000.

S. C., Charleston—Library.—W. C. Miller, chairman of building committee, Charleston Library Society, 414 People's Office Bldg., will receive bids until March 1 to erect library building on King St., according to plans by McGowan & Hawley, 34 S. 16th St., Philadelphia, Pa.; certified check for \$1000, payable to Mr. Miller; plans and specifications from architects on deposit of \$10. (Recently detailed.)

S. C., Spartanburg—Cafe.—J. B. Cleveland, Dr. J. F. Cleveland and W. E. Burnett have plans by L. D. Proffitt for cafe building; two stories; pressed brick; granite trimmings; 50x80 feet; dining hall to have tile flooring, marble trimmings and classic beam ceiling; second floor for 12 sleeping-rooms with private baths; cost \$12,000.

S. C., Union—Hospital.—Hospital Association, T. P. Kennedy, secretary, will open bids in February to erect Wallace Thomson Hospital; 40x66 feet; two stories and basement; brick veneer; metal tile roofs; steam heat; electric lighting; call bells; hand-power elevator; cost \$10,000; plans by Sayre & Baldwin, Anderson, S. C. (T. P. Kennedy and others recently noted interested in erection of hospital.)

Tenn., Knoxville—Art Gallery, etc.—Knoxville Lyceum, Mrs. George F. Mellen, president, plans to erect additional story to Lyceum Building for art gallery and museum.

Tenn., Knoxville—Exposition.—National Conservation Exposition Co. will begin erection about March 1 of East Tennessee, Southern States and health and model school buildings, plans for all of which are practically completed. (Previously noted.)

Tenn., Knoxville—Clubhouse.—Appalachian Club, W. T. Kennedy, president, will enlarge dining-room of hotel, provide additional sleeping-rooms upstairs, and erect 20-room addition.

Tenn., Nashville—Settlement-house.—Warlike Settlement Home in North Nashville, under direction of Methodist Training School, of which W. F. Quillian is president, plans to enlarge home; plans call for erection of gymnasium, rooms for clinics, baths, etc.

Tex., San Antonio—Hospital.—Santa Rosa Hospital will erect brick dormitory on W. Houston St.; cost \$15,000.

Tex., Paris—Hospital.—Sisters of Charity plan to expend \$50,000 to \$75,000 to erect hospital on Clarksville St.; stone and brick; fireproof; when new structure is completed will convert present frame infirmary building into academy.

RAILWAY STATIONS, SHEDS, ETC.

Ark., Leslie.—Missouri & North Arkansas Railroad, W. O. Galbreath, engineer maintenance of way, Eureka Springs, Ark., will erect \$7500 depot.

Ga., Savannah.—Central of Georgia Rail-

road, C. K. Lawrence, chief engineer, will erect storage building on New St.; 75x90 feet; one story; concrete; construction to permit additional stories later; cost \$3500.

Ky., Blackey.—Lexington & Eastern Railway, John Marston, Jr., chief engineer, Lexington, Ky., will erect depot. (See Ky., Whitesburg.)

Ky., Neon (not a postoffice).—Lexington & Eastern Railway, John Marston, chief engineer, Lexington, Ky., will erect depot. (See Ky., Whitesburg.)

Ky., McRoberts.—Lexington & Eastern Railway, John Marston, Jr., chief engineer, Lexington, Ky., will erect depot. (See Ky., Whitesburg.)

Ky., Whitesburg.—Lexington & Eastern Railway, John Marston, Jr., chief engineer, Lexington, Ky., will erect depots at Whitesburg, Blackey, Neon and McRoberts, Ky.

Md., Crisfield.—New York, Philadelphia & Norfolk Railroad, U. F. White, supervisor, Salisbury, Md., will erect passenger depot and make other improvements; Port Deposit granite and brick; granolithic walks and drives, etc.

Md., Cumberland.—Baltimore & Ohio Railroad Co., F. L. Steuart, chief engineer, Baltimore and Charles Sts., Baltimore, Md., will erect 180-foot extension to freight station just completed, pave around driveways and make other improvements.

Mo., Joplin.—Missouri Pacific Railway System, J. R. Stephens, chief engineer, St. Louis, Mo., and Missouri, Oklahoma & Gulf Railway, J. J. Harrison, chief engineer, Muskogee, Okla., plan to erect passenger and freight depots; former probably 50 feet wide; brick; cost \$40,000; freight station probably of concrete and cost \$40,000. (Previously noted.)

Va., Lexington.—Baltimore & Ohio Railroad Co., F. L. Steuart, chief engineer, Baltimore and Charles Sts., Baltimore, Md., will erect passenger station; brick; cost \$3000.

W. Va., Morgantown.—Morgantown & Wheeling Traction Co. purchased site for terminal and station.

W. Va., Martinsburg.—M. A. Long, assistant to chief engineer, Baltimore & Ohio Railway Co., Baltimore and Charles Sts., Baltimore, Md., states no improvements, as recently reported, have been authorized to passenger station.

SCHOOLS

Ala., Birmingham.—Board of Education, John L. Parker, president, will petition City Commissioners for authority to erect eight additional schools at probable cost of \$1,500,000 as follows: two each at Woodlawn and Ensley, one at Wylam, one near Fifteenth Ave., Birmingham; high school on South Side, one at East Lake, addition to North Birmingham, and probably negro school.

Ark., Buckner.—School District No. 18, N. L. Eddy, secretary of board, will erect school building; two stories; 70x80 feet; brick; stoves; slate or galvanized tin roof; cost \$7000 to \$9000; architect not employed.

Ala., Florida.—State High School Commission selected Florida as location for proposed Covington County High School, to be erected at cost of \$20,000.

Fla., Gary.—Gary Independent School Trustees have plans by Bonfoey & Elliott, Tampa, Fla., for school; brick; cost \$15,000 to \$20,000. (Previously noted.)

Ga., Jefferson.—City will erect four-room addition to school; cost \$5000; plans not definitely determined; bids opened in 30 to 60 days; J. P. Kelly, Mayor. (Bond issue previously noted.)

Ga., Pickens County.—Tate Industrial School, Samuel Tate, president, Tate, Ga., commissioned Cooke & Swope, landscape architects, Hillier Bldg., Atlanta, Ga., to prepare plans for school buildings, orchards and agricultural developments, construct dam for water-power, etc. Address N. Thompson.

Ky., Danville.—Central University of Kentucky is having plans prepared by Grant C. Miller, Chicago, Ill., for gymnasium, 60x120 feet, to cost \$22,000; library, 40x50 feet, and stackroom, 20x40 feet, to cost \$24,000; will open building bids early in March; ordinary construction; steam heat; electric lights; tile or slate roof. (Recently noted.)

Ky., Louisville.—Board of Education is having plans prepared by Brinton B. Davis, Louisville, for school at 26th and Date Sts.; two stories and basement; English type; fireproof construction; reinforced concrete floors finished with narrow maple; brick and tile walls covered with hard plaster in sand finish; direct steam heat controlled by thermostats in each room; gymnasium, heating

and ventilating equipment, etc., in basement; six classrooms, etc., on each floor; accommodation for 600 children; cost \$109,000. (Recently noted.)

Ky., Danville.—Kentucky College for Women is having plans prepared by Grant C. Miller, Chicago, Ill., for administration building, dormitory and central power plant to cost about \$225,000. (Recently noted.)

Ky., Munfordville.—Munfordville Graded School district voted bond issue to purchase site and erect building for county high school and graded school.

La., Grand Cane.—City will rebuild school; fireproof construction; cost \$12,000 to \$15,000; proposals may be addressed to W. H. Smith. (Recently reported burned.)

La., New Orleans.—Department of Public Finances, Accounting Division Office, New Orleans, will receive bids until February 19 to erect brick school in square bounded by Dumaine, Johnson, Galvez and St. Philip Sts.; bids on blank forms furnished by City Engineer, in whose office plans and specifications are on file; City Treasurer's receipt for deposit of \$500 with each bid; A. G. Ricks, Commissioner.

Md., Towson.—State Normal School Committee, J. Charles Luthicum, chairman, 217-219 St. Paul St., Baltimore, invited following architects to submit designs for \$600,000 Normal School buildings, consisting of two dormitories, administration building, central power plant and kitchen building; Wyatt & Nolting, Keyser Bldg.; Otto G. Simonson, Maryland Casualty Tower Bldg.; T. W. Pietsch, American Bldg.; Parker, Thomas & Rice, Union Trust Bldg.; A. C. Leach, 323 N. Charles St.; Elliott & Emmart, Union Trust Bldg., all of Baltimore, Md.; J. R. Marshall of Hornblower & Marshall, 1410 H St. N. W., Washington, D. C., is consulting architect. (Previously noted.)

Miss., Mississippi City.—Mississippi City Separate School District voted issuance of \$10,000 of bonds to erect graded school. Address Chancery Clerk of Harrison County, Gulfport, Miss. (Recently noted under Miss., Gulfport.)

Mo., Joplin.—City is considering election to vote on \$30,000 bond issue for school improvements; will probably include \$3000 school on or near S. Main St. between 26th and 30th Sts., \$6000 four-room brick school in Serhan Addition, \$3000 two-room frame school in College Hill Addition, four to six-room addition to McKinley School, \$4000 to \$5000 worth of improvements to heating apparatus in various schools, etc.; Walter Scott, member of Board of Education.

Mo., Kansas City.—School District of Kansas City, J. B. Jackson, secretary, will award contract April 1 to erect Southeast High School at Linwood Blvd. and Indiana Ave.; 216x246 feet; Carthage stone base; dark matt-faced brick walls with white terracotta trimmings; fireproof construction; metal rib windows; 75 rooms to 1500 pupils; first floor to contain auditorium, gymnasium, shower baths, swimming pool, lockers, etc.; cost \$200,000; plans by Charles A. Smith, Kansas City.

Mo., Maplewood.—Maplewood School District will vote on \$100,000 bond issue to erect \$50,000 high-school addition to Richmond Heights School, etc. Address District School Trustees.

N. C., Charlotte.—Mecklenburg County Board of Education will erect school at Hoskins to cost \$12,000.

N. C., Cherryville.—City contemplates voting on \$45,000 bond issue for schools, etc. Address The Mayor. (See "Electric Plants.")

N. C., Pineville.—City will petition Legislature for authority to issue \$20,000 of bonds to erect school. Address The Mayor.

N. C., Raeford.—City will petition Legislature for authority to issue \$35,000 of bonds to erect school. Address The Mayor.

Tenn., Nashville.—City contemplates issuing \$300,000 of bonds to erect proposed wing to Hume-Fogg High School; Albert E. Hill is interested.

Tex., Austin.—Bids will be received until February 11 at office of F. M. Bralley, State Department of Education, to erect reinforced concrete gymnasium building for Sam Houston State Normal School; certified check for \$500; plans on file at above office.

Tex., Clarendon.—City voted \$25,000 bond issue to erect school; plans being prepared. Address The Mayor.

Tex., Huntsville.—M. L. Waller, architect, Fort Worth, Tex., will receive bids until February 19 to erect reinforced concrete gymnasium building for Sam Houston State Normal; certified check for \$500. (Recently noted.)

Tex., Paris.—Sisters of Charity will con-

vert infirmary building into academy. (See "Miscellaneous Structures.")

Tex., San Antonio.—Bexar County Commissioners, Frank Newton, County Clerk, is considering election in common school district No. 40 to vote on \$23,000 bond issue to erect school.

Tex., Sherman.—School Board opens bids February 21 to erect 12-room grammar school; 103x79 feet; fireproof construction; steam (fan ventilation) heat; tar and gravel roof; cost \$40,000; plans by C. H. Page & Bro., Austin, Tex. (Previously noted.)

Tex., Sherman.—Austin College, Dr. T. S. Clyce, president, will rebuild burned college; probably four buildings; cost \$300,000. (Recently reported burned.)

W. Va., Moundsville.—Board of Education is considering plans for addition to North School.

W. Va., Summerville.—Directors of Nicholas County High School, W. G. Brown, secretary, rejected all bids to erect high school and will receive new bids; probable cost \$40,000; plans by H. Rus Warne, Charleston, W. Va. (Previously noted.)

STORES

Ala., Birmingham.—Drake-Knight Realty Co. will erect two two-story frame buildings at Pearl St. and First Ave.; cost \$3000.

Ala., Birmingham.—Scruggs Investment Co., J. Hubert Scruggs, president, will erect two-story brick-vener building at Sixteenth Ave. and 25th St.; cost \$12,000.

Ala., Birmingham.—J. B. Levert, Five-points, Ala., will expend \$7000 to repair two-story brick building.

Ala., Birmingham.—R. D. Burnett will expend \$5000 to repair building at Third Ave. and 19th St.

Ark., Hozie.—Harry W. Boas is having plans prepared by H. A. Lesmeister, Jr., Jonesboro, Ark., for store and office building; 50x140 feet; two stories; fireproof construction; electric lighting; tar and gravel roof; cost \$15,000. (Recently noted.)

D. C., Washington.—M. Fetterman, 701 H St. N. E., will expend \$3000 to repair store and dwelling at 707 H St. N. E.

Fla., Jacksonville.—E. J. L'Engle will erect one-story brick building on Myrtle Ave., between Swan St. and McCoy's Creek; cost \$5000.

Fla., West Palm Beach.—J. G. McCrory Company, 621 Broadway, New York, purchased site at Poinsettia and Clematis Sts. and will erect business block; frontage 100 feet.

Ga., Atlanta.—L. E. Hamilton, Jr., will erect building on Ashby St. near Oak St.

Ga., Augusta.—J. S. Fox is erecting two-story brick building at Gwinnett and Thomas Sts.; cost \$4700.

Ga., Lagrange.—Howard Park will erect four stores on Pull St.; 25x100 feet.

Ga., Moultrie.—Commercial Investment Co., R. J. Corbett, director, will erect store and office building. (See "Bank and Office Buildings" and "Machinery Wanted.")

Ga., Washington.—T. M. Nabers is having plans prepared for business building; two stories; brick; plate-glass front; frontage 42 feet.

Ky., Middlesboro.—J. A. Thompson (not J. A. Thomas as recently stated) is receiving bids to erect store and dwelling; 25x60 feet; brick; ordinary construction; felt roof. (See "Machinery Wanted.")

Mo., Joplin.—Interstate Grocery Co. is negotiating for site at 10th and Main Sts. with view of erecting building.

Mo., Kansas City.—B. Adler of Adler Millinery Co. will erect store building at 9th St. and Broadway to contain four stores; one story and basement; cost, including site, \$70,000.

Mo., St. Louis.—Russack & Kory will expend \$4873 to repair store at 814-816 Lucas St.

Mo., St. Louis.—Edward Medier will erect store and apartment building at Florissant and Pope Aves.; three stories; lower floor for stores; upper floors for apartments of five rooms, bath and sun parlor; cost \$50,000.

Mo., St. Louis.—Benjamin F. Coalter will erect store building on Hamilton Ave.

N. C., Charlotte.—Charlotte Hardware Co. will expend several thousand dollars for improvements to store building, including installation of new front, etc.

N. C., Raleigh.—W. N. Jones and J. W. Bailey will erect building with frontage of 54 feet on Main St.; three stories; lower floor for two stores; upper floors, 30 rooms, for Hotel Bland.

S. C., Spartanburg.—R. Skalski will erect business building on S. Morgan St.; two stories; brick; 12x88 feet; cost several thousand dollars.

Tenn., Adams.—J. B. Sugg and E. W. Robertson will soon let contract to erect three store buildings; one 24x50 feet, two 20x110 feet; brick; ordinary construction; cost \$8000; cost of lighting plant, \$300; cost of roofing, \$300. (Recently noted.)

Tenn., Jonesboro.—W. E. May will erect business building.

Tenn., Memphis.—T. K. Riddick and M. G. Evans purchased three stores on Vance Ave. between 3d St. and Rayburn Blvd.; will improve, erecting one story to at least one store.

Tenn., Nashville.—Charles Hirschberg will, it is reported, erect business block on Broadway.

Tex., Cleburne.—Scott Brothers, 213 S. Main St., have not made plans to rebuild store recently noted. (See "Machinery Wanted.")

Tex., Dallas.—Harris Lipsits Company, 710-14 Commerce St., will erect annex at Jackson and Austin Sts.

Tex., El Paso.—Central Investment Co. will erect business building at Myrtle Ave. and Stanton St.; two stories; brick; cost \$12,000; plans by Trost & Trost, El Paso.

Tex., Goliad.—L. J. Linecum will erect store building on Railroad St.

Tex., Houston.—W. C. Munn Company will erect store building at Travis St. and Capitol Ave.; four stories and basement; steel and concrete; walls to support three additional stories. (Recently noted.)

Tex., Houston.—T. H. Wallace is having plans prepared by O. H. P. Hudesill, 508½ Travis St., Houston, for store building; cost \$3300; construction by owner. (Recently noted.)

Tex., Lassater.—Dr. W. R. Smith will rebuild store to replace structure reported burned.

Tex., Longview.—J. C. Turner will erect four store buildings; 28x100 feet; glass fronts.

Tex., Mason.—Oscar Seaguilt will erect two-story stone building on site 25x79 feet.

Tex., Orange.—Dr. E. W. Brown is reported as to erect business building.

Tex., Orange.—Mrs. Henry J. Lucher will erect, it is reported, store, theater and office building. (See "Theaters.")

Tex., Petty.—A. Collier is interested in erecting store, bank and office building. (See "Bank and Office Buildings.")

Tex., San Antonio.—G. R. Karges will erect brick store building on E. Crockett St.; cost \$8000.

Tex., San Antonio.—J. M. Nix will erect two-story store building on Houston St.; cost \$4400.

Tex., San Antonio.—Bids opened February 1 to erect two-story and basement brick store building for Pat Jones on S. Flores St.; plans by Beverly W. Spillman, 216-17 Alamo Bank Bldg., San Antonio.

Tex., Temple.—Fred Blohm will erect business block at 3d and Central Sts.; two stories; brick; cost \$13,000.

Tex., Yonkum.—John Tucker, Houston, Tex.; Stahl & Dullay and A. E. Beck, both of Yonkum, will erect three brick business buildings on Lott St.

Va., Richmond.—J. Lee Davis is reported as to erect store or hotel to replace Davis Hotel on Main St.

W. Va., Huntington.—H. J. Homrich will erect business block to replace structure reported burned at loss of \$12,000; probably four stories.

W. Va., McMechen.—Peter Seltner will erect business building; brick foundation.

THEATERS

Md., Baltimore.—Samuel E. Reinhard, 2424 Eutaw Pl., plans to convert Shaw stables on Madison Ave. above North Ave. into moving-picture theater.

Tex., Hillsboro.—Elks' Building Association is having plans prepared for lodge and opera-house building. (See "Association and Fraternal.")

Tex., Houston.—Hippodrome Amusement Co., W. Giebig, manager, leased H. House property and will, it is reported, remodel for fireproof theater at cost of \$35,000.

Tex., Orange.—Mrs. Henry J. Lucher purchased site at 5th and Front Sts. and will, it is reported, erect theater, store and office building; two stories; fireproof.

WAREHOUSES

Ala., Birmingham.—Birmingham Paper Co. will expend \$75,000 to erect addition to

building; 150x175 feet; three stories; mill construction; heating and lighting not determined; composition roof; architect not selected. (Recently noted.)

Ala., Foley.—Society of Equity is reported as planning to erect warehouse and office building.

Fla., Jacksonville.—Gustav Muller will erect warehouse on Enterprise St.; one story; brick; cost \$5000.

Md., Baltimore.—William G. Scarlett & Co., 729-35 E. Pratt St., is having plans prepared by Owens & Sisco, Continental Bldg., Baltimore, for warehouse; six stories and basement; 50x200 feet; steel construction; pile foundation.

Mo., St. Louis.—Julius Schlueter will erect \$17,000 three-story warehouse at 4616-18 N.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES.

Fla., Pensacola.—A. J. Keynton has plans by and awarded contract to Keynton Construction Co. to erect apartment-house recently noted; 38x70 feet; two stories; brick and pebble-dash exterior; ordinary construction; hot-water heat; gas and electric lighting; terra-cotta tile and tar and gravel roof; cost \$6000. (See "Machinery Wanted.")

Ga., Savannah.—City Home Investors Co. awarded contract to Citizens' Construction Co., Savannah, to erect two-story frame apartment-house at Bolton and E. Broad St.; four apartments; also frame residence at 538 Waldburg St.; total cost, \$10,000.

Ga., Savannah.—R. W. Farr, 836 Anderson St., has plans by and awarded contract to C. S. O'Connell, 305 40th St., Savannah, to erect proposed apartment-house; 28x53 feet; two stories; ordinary construction; grates and gas range; gas and electric lighting; tin roof; cost \$3000. (Recently noted.)

Md., Baltimore.—Albert Bondy, Edward Apartments, Brookfield Ave. and Whitelock St., awarded contract to Alto Construction Co., Knickerbocker Bldg., Baltimore, to erect apartment-house adjoining present apartment-house at Brookfield Ave. and Whitelock St.; three stories; 25x77 feet; ornamental brick; terra-cotta trimmings; elevator; cost \$12,000; plans by Edward H. Glidden and Clyde N. Fris, Maryland Casualty Tower Bldg., Baltimore. (Recently noted.)

Mo., St. Louis.—Americann Real Estate Building & Investment Co. awarded contract to Frank L. Dittmeier, St. Louis, to erect six flat buildings containing 22 three-room apartments at Burd Ave. and N. Market St.; total investment, \$40,000; building will be two stories; mill construction; furnace heat; electric lighting; gravel composition roofing; plans by C. W. Van Keuren.

Mo., St. Louis.—E. B. Hill awarded contract to G. B. O'Reilly, 723 Chestnut St., St. Louis, to erect tenement-house at 2401-03-07-09-11 Cora St.; five buildings; single flats; ordinary construction; gas heat and stoves; gas lighting; composition roof; cost \$19,000; plans by W. P. McMahon, Wainwright Bldg., St. Louis. (Recently noted.)

Va., Richmond.—William L. Carneal, 1626 W. Grace St., awarded contract to W. S. Quarles to erect tenement-house; 75x64 feet; two stories; ordinary construction; grates; electric lighting; tin roof; cost \$11,000; plans by owner. (Recently noted.)

ASSOCIATION AND FRATERNAL

Tex., Flatonia.—Herman Sons Park Verein awarded contract to A. F. Kock, Flatonia, to erect lodge building. (Recently noted.)

BANK AND OFFICE

Ala., Birmingham.—Jefferson Realty Co. awarded contract for excavation and general contract to F. W. Mark Construction Co., Inc., Brown-Marx Bldg., Birmingham, to erect bank and office building for Jefferson County Savings Bank; 25 stories; 75x100 feet; fireproof; steam heat; electric light; tile roofing; steel frame; exterior of granite and terra-cotta; cost \$750,000; awarded contract for steel frame, delivered at Birmingham, to Virginia Bridge & Iron Co., Roanoke, Va., and for erection of steel frame to Bergendahl-Bass Engineering & Construction Co., Chicago, Ill.; for terra-cotta to Federal Terra-Cotta Co., Woodbridge, N. J.; for fireproofing to North Birmingham Fire Brick & Prooding Co., Birmingham; plans by William C. Weston, Brown-Marx Bldg., Birmingham. (Recently noted.)

Fla., Miami.—John and Thomas L. Town-

Broadway and \$3000 factory building at 4622 N. Broadway.

Mo., St. Louis.—Main St. Warehouse Co., incorporated with \$10,000 capital stock by Ernest Baxter, J. D. Watson, R. E. Kimbell and others.

N. C., Durham.—R. O. Everett will erect number of storage-houses on Ramseur St.

S. C., Hemingway.—Farmers' Tobacco Warehouse, H. L. Baker, president, will erect two tobacco warehouses and number of prize-houses.

Tex., Houston.—Southwestern Rice Co. engaged Southern Construction & Mill Supply Co. to prepare plans for warehouse and elevator for handling rice.

Tex., Marshall.—D. D. Dodd will erect warehouse.

ley, Tulsa, Okla., awarded contract to Wm. A. Otter, Miami, to erect Townley Bldg. at Ave. C and 12th St.; two stories; three storerooms on lower floor; upper story for offices; cost \$22,000; plans by August Geiger, Miami.

Fla., Tallahassee.—First National and State Savings Banks awarded contract to Mr. Clayton, Atlanta, Ga., to erect store, bank and office building; brick and stone; two stories.

Ky., Lexington.—Fayette National Bank awarded contract for structural steel for bank and office building to Noelke & Richards Iron Co., 180 E. Palmer St., Indianapolis, Ind.; 60x190 feet; 15 stories; fireproof; flat slag roof; cost \$30,000; plans by McKim, Mead & White, New York; general contract awarded to George A. Fuller Company, Munsey Bldg., Washington, D. C. (Recently noted.)

Miss., Raleigh.—Little-Checker Construction Co., Anniston, Ala., has contract to erect bank building; two stories.

S. C., Greenwood.—E. L. Stallings & Co., Spartanburg, S. C., have contract to install heating plant and plumbing in office building and Oregon Hotel to be erected by J. S. Bailey and associates according to plans by A. Ten Eyck Brown, Atlanta, Ga.; general contract for \$62,000 office building (recently noted) awarded to W. W. Griffin Construction Co., Atlanta, Ga. (See "Hotels.")

Tenn., Memphis.—E. R. Farham, H. L. Willford and B. B. Well awarded contract to erect bank and office building to be occupied by Mississippi Valley Trust Co.; cost \$25,000; plans by George F. Weller, Memphis. (Recently noted.)

Tex., Asherton.—J. A. Brown awarded contract to J. H. Magee to erect building to be occupied by Asherton State Bank; brick; 25x55 feet.

Tex., Houston.—S. H. Kress & Co., 396 Broadway, New York, awarded contract to erect store and office building. (See "Stores.")

Va., Roanoke.—People's National Bank awarded contract to Virginia Bridge & Iron Co., Roanoke, Va., for structural steel for bank and office building; 45½x125 feet; 10 stories; fireproof construction; cost \$300,000; plans by Stern & Fellheimer, New York. (Recently noted.)

CHURCHES

Ala., Birmingham.—Jonesboro Baptist Church awarded contract to Croftwell Bros. Lumber Co., Birmingham, to erect Sunday-school.

Md., Baltimore.—Howard Park Methodist Episcopal Church, James E. Lynch, chairman of building committee, awarded contract to C. W. Littleton & Son, West Forest Park, Baltimore, to erect edifice; 43x35 feet; frame; hot-air heat; electric lighting; shingle roof; cost \$5500; plans by John F. Gettler, Howard Park; all sub-contracts awarded. (Previously noted.)

W. Va., Wheeling.—St. Mary's of the Perpetual Help, Greek Catholic Ruthenian Church, Rev. V. R. Delania, pastor, awarded contract to A. B. Imhoff to erect framework of edifice at cost of \$2000; total cost \$5000; plans by George S. Mooney, Wheeling. (Previously noted.)

CITY AND COUNTY

Mo., St. Louis.—Bathhouse.—City awarded contract to S. L. Jones, Mercantile Bldg., St. Louis, to erect public bath No. 3; William T. Findly, secretary Board of Public Improvement. (Recently noted.)

COURTHOUSES

Fla., Bradentown.—Manatee County Commissioners awarded contracts to erect courthouse as follows: General contract to Falls City Construction Co., Louisville, Ky.; steel, Southern Iron & Steel Co., Birmingham, Ala.; reinforcing steel, J. T. Ryerson & Son, 72 W. Adams St., Chicago, Ill. (Previously noted.)

Miss., Monticello.—Lawrence County Commissioners awarded contract at \$4582 to Gudenhach Plumbing Co., Jackson, Miss., for electric-light and heating system of courthouse, for which general contract was awarded to Little-Clecker Construction Co., Anniston, Ala., at \$39,000; plans by R. H. Hunt, Chattanooga, Tenn. (Previously noted.)

DWELLINGS

Ark., Fort Smith.—J. H. Butler awarded contract to erect several rent houses in East End.

Fla., Anna Maria.—L. M. Crigler, Tampa, Fla., awarded contract to erect residence at Anna Maria Beach.

Fla., Bartow.—Leon Webb awarded contract to erect cottage on Wilson Ave.

Fla., Miami.—William Jennings Bryan awarded contract to Roy Swanson, Coconut Grove, Fla., to erect residence; reinforced concrete; 10 rooms; completion by July 1.

Fla., Tampa.—E. R. & E. H. Gumby will expend \$15,000 to erect dwelling; 10 rooms; fireproof construction; fireplaces; metal roof; plans by F. J. Kennard; contract recently noted awarded to G. A. Miller of Tampa.

Ga., Atlanta.—W. E. Worley awarded contract to C. Shelverton, Atlanta, to erect two brick-veneer dwellings; slate roof; cost \$3000 each.

Ga., Atlanta.—M. P. Gaines awarded contract to J. P. Gore to erect two-story frame dwelling on Willard St.; cost \$4250.

Ga., Savannah.—City Home Investors Co. awarded contract to erect residence. (See "Apartment-houses.")

La., New Orleans.—George Montgomery awarded contract to John Minot, National Realty Bldg., New Orleans, to erect residence; dimensions not determined; ordinary construction; hot-air heat; tile roof. (Recently noted.)

Md., Easton.—William Draper Brinckle, Wilmington, Del., awarded contract to Geo. Lane, Queenstown, Md., to erect residence on Poplar Dell property; brick and pebble-dash; colonial style; 39x32 feet; ordinary construction; steam heat; electric lighting; shingle roof; cost \$5000; also to remove present residence on property distance of about one-eighth mile, remodel and place on foundation already completed; plans by owner.

N. C., Albemarle.—Wiscasset Mill awarded contract to C. F. Niblock to erect 20 dwellings; three and four rooms.

S. C., Ehrhardt.—G. J. Herndon awarded contract to A. A. Ziegler to erect dwelling recently noted; 47x78 feet, including porches; wood construction; heaters; lighting not determined; metal shingle roof; cost \$2500. (See "Machinery Wanted.")

Tenn., Memphis.—Mrs. E. K. Barnes awarded contract to J. G. Nowlin to erect two-story brick residence at 1992 Cowden Ave.; cost \$5000.

Tex., Houston.—E. H. Dumble, 303 Union National Bank Bldg., has plans by and awarded contract to F. J. Maret, Houston, to erect two eight-room dwellings; frame; shingle roof; cost \$15,000.

Va., Richmond.—W. R. and S. S. Stansbury will erect two-story frame residence on Temple St. between Beverly and Taylor Sts.; ordinary frame construction; gas and electric lighting; tin roof; cost \$2800; plans and construction by Davis Bros., Inc., Richmond, Va.

W. Va., Beckley.—George W. Blair, Jr., awarded contract to George W. Blair, Jr., Lumber Co. to erect dwelling; 44x60 feet; two stories; ordinary construction; hot-water heat; electric lighting; slate roof; cost \$10,000. (Recently noted.)

W. Va., Warwood.—Hesse & Kirchner awarded contract to H. F. Devore for foundation for residence in Home Acres; concrete and tile.

W. Va., Warwood.—Lea Huffman, Bridgeport, W. Va., awarded contract to erect store and dwelling. (See "Stores.")

GOVERNMENT AND STATE

Md., Jessups.—Reformatory.—State awarded contract at about \$85,000 to D. M. Andrew Company, Mt. Vernon Ave. and 26th St.,

Baltimore, Md., to erect additions and make alterations to House of Correction; 33x54 feet and 26x33 feet; two stories; fireproof and mill construction; motor and hand elevators; slate and composition roofing; plans by Theodore Wells Pietsch, American Bldg., Baltimore, Md. (Contract recently noted awarded, but this contract rescinded.)

Okla., Guthrie.—Postoffice.—Treasury Department, Oscar Wenderoth, supervising architect, Washington, D. C., awarded contract at \$114,050 to King Lumber Co., Charlottesville, Va., to erect extension to post-office building. (Recently noted.)

Tex., Paris.—Postoffice.—Treasury Department, Oscar Wenderoth, supervising architect, Washington, D. C., awarded contract to Newport News Construction & Engineering Co., Newport News, Va., to erect post-office; cost about \$98,000. (Recently noted.)

HOTELS

Ala., Birmingham.—T. H. Molton awarded contract to Fred A. Jones Building Co., American Bldg., Birmingham, for excavation for commercial hotel; lot 50x190 feet; six or eight stories; if six stories, 104 rooms and 44 bathrooms; if eight stories, 146 rooms and 62 bathrooms; fireproof construction; low-pressure boiler; electric elevator; composition roof; cost \$300,000; plans by H. B. Wheelock, Stern Bldg., Birmingham, to whom general proposals may be addressed. (Recently noted under "Apartment-houses.")

S. C., Greenwood.—E. L. Stallings & Co., Spartanburg, S. C., have contract at \$20,000 to install heating plant and plumbing in Oregon Hotel and office building to be erected by J. S. Bailey and associates; general contract for hotel awarded to Smith Construction Co., Athens, Ga., at \$93,900; six stories; reinforced concrete construction; 75 rooms and bath; plans by A. Ten Eyck Brown, Atlanta, Ga.; L. D. Proffitt, Spartanburg, S. C., supervising architect. (Recently noted.)

MISCELLANEOUS

Ala., Montgomery.—Clubhouse.—Capital City Country Club, L. Strauss, secretary, awarded contract to Robert Majors to erect clubhouse; 100x100 feet; ordinary construction; metal and shingle roof; cost \$12,500 to \$15,000; plans by Frank Lockwood, 121 Adams St., Montgomery. (Recently noted.)

Fla., Tampa.—Clubhouse.—William A. Sims of Atlanta, Ga., secretary-treasurer of Flexhurst Company, awarded contract to T. J. Wallace to erect clubhouse on Anna Maria Key; 100x60 feet; cement foundation; brick walls; plans by A. H. Johnson, Tampa.

Md., Baltimore.—Undertaking Establishment.—William J. Tickner & Sons, 2506 Pennsylvania Ave., have plans by and awarded contract to Horace Ford, 20 Knickerbocker Bldg., Baltimore, to erect addition in rear of 1664 and 1726 W. North Ave.; one story; brick; 100x60 feet; slag roof; cost \$5000.

Md., Baltimore.—Stables.—Baugh Chemical Co., 25 S. Calvert St., awarded contract to Charles L. Stockhausen, National Marine Bank Bldg., Baltimore, to erect stable at Clinton St. and Twelfth Ave. to replace burned structure; cost \$12,000. (Recently reported burned.)

Mo., Kansas City.—Home.—Church of God awarded contract to William H. Spaw to erect missionary home at 5816 E. 13th St.; two stories; frame with stone and stucco veneer; cost \$10,000; completion by September 15.

Tenn., Memphis.—Hospital.—Lucy Brinkley Hospital trustees awarded contract to W. S. La Grill, 670 Alston Ave., Memphis, to erect four-story reinforced concrete addition to hospital; plans by John Galsford, Cotton Exchange, Memphis. (Recently noted.)

RAILWAY STATIONS, SHEDS, ETC.

Fla., Pensacola.—Pensacola Electric Co. awarded contract to erect car barn; 120x63 feet; fireproof. (Recently noted.)

Tex., Beaumont.—St. Louis & San Francisco Railroad Co., M. C. Byers, chief engineer, Springfield, Mo., awarded contract to J. W. Thompson & Co., St. Louis, Mo., to construct freight and passenger terminals, including passenger station, inbound and outbound freight sheds, yards, team tracks, etc.; cost \$500,000. (Recently noted.)

SCHOOLS

Ky., Horse Cave.—Hart county and Horse Cave school boards awarded contract to D. N. Combs & Son, Horse Cave, to erect school; cost \$16,908; contractor receives sublets on brick work. (See "Machinery Wanted.")

S. C., Columbia.—City School Commissioners awarded contract at \$5746 to American

Heating & Ventilating Co., Richmond, Va., for heating and ventilating plant for Logan School, for which general contract was awarded to W. R. Harbeck, St. Charles, S. C., at \$58,292; two stories and basement; blower heating system; 190x84 feet; 13 classrooms; plans by Wilson & Sompayrac, Columbia. (Recently noted.)

Va., Staunton.—Staunton Military Academy awarded contract to Stoddard & Co. to erect dining hall and dormitory; 105x55 feet; three stories; fireproof construction; steam heat; electric lighting; metal roof; cost \$30,000; plans by T. J. Collins & Sons, Staunton.

STORES

Fla., Bartow.—Wilson Hardware Co. awarded contract to W. T. Ellis to erect store building; 54x80 feet; brick and wood; elevator; metal roof; cost \$12,000; plans by J. Bishop, Bartow. (See "Machinery Wanted.")

Fla., Fort Myers.—Odum & Gilliam awarded contract to G. A. Miller, Tampa, Fla., to erect proposed store building; 40x70 feet; mill construction; hand elevator; metal roof; cost \$10,000; plans by F. J. Kennard, Tampa.

Fla., Tallahassee.—First National and State Savings banks awarded contract to erect store, bank and office building. (See "Bank and Office.")

La., Lake Charles.—J. Frank awarded contract to Sea & Son to erect furniture store; 100x100 feet; two stories; ordinary construction; two freight elevators; composition roof; cost \$4500. (Recently noted.)

Okla., Dewey.—J. K. Green awarded contract to J. J. Ealy to erect store; 20x70 feet; fireproof construction; gas heat; electric lighting; composition roof; plans by Walter Everman, Bartlesville, Okla. (Recently noted.)

Tex., Beeville.—W. O. McCurry awarded contract to L. W. Franks, Beeville, to erect building at Washington and Jefferson Sts.; one story; brick; 50x130 feet.

Tex., Brenham.—Winkelmann & Bohne awarded contract to remodel department store, including installation of plate-glass front.

Tex., Houston.—S. H. Kress & Co., 396 Broadway, New York, awarded contract to

Buchanan & Gilder, Fort Worth, Tex., to erect store building at Main St. and Capitol Ave.; eight stories and basement; 100x150 feet; reinforced concrete; first two floors and basement for store; upper floors for offices. (Previously noted.)

Tex., Taylor.—J. S. Jones will expend \$8000 (not \$20,000 as recently reported) to erect store and office building; 30x100 feet; brick; electric lighting; rubberoid roofing; contract awarded to G. B. Brieger of Taylor.

Tex., Yoakum.—Cook & Traxler awarded contract to erect brick business building on Lott St.

W. Va., Warwood.—Lea Huffman, proprietor of B. & O. poolroom, Bridgeport, W. Va., awarded contract to erect store and dwelling on Main St. between 18th and 19th Sts.

WAREHOUSES

Ala., Birmingham.—Southern Bell Telephone & Telegraph Co., main office, Atlanta, Ga., will erect warehouse on Sixth Ave. between 17th and 18th Sts.; two stories; 51x188 feet; reinforced concrete; brick curtain walls; steam or Honeywell hot-water system of heating; Barrett specification roofing; cost \$45,500; plans by P. Thornton Marrye, Candler Bldg., Atlanta, Ga.; contract awarded to Fred A. Jones Building Co., Birmingham; D. F. Turnbull, district manager.

Md., Baltimore.—J. Wilson Leakin, Fidelity Bldg., awarded contract to J. J. Moylan, 117 E. Center St., Baltimore, to erect warehouse for J. R. M. Adams at Eutaw and Franklin Sts.; four stories; ornamental brick; 38x90 feet; plate-glass windows; cost \$20,000 to \$25,000. (Recently noted.)

Tenn., Memphis.—S. Steinberg & Co., 84 N. Front St., awarded contract to C. W. Holmes to erect warehouse at Jefferson Ave. and Promenade; three stories; reinforced concrete; cost \$40,000.

Tex., San Antonio.—Feden Iron & Steel Co., Houston, Tex., awarded contract to Trinity Construction Co., Dallas, Tex., to erect warehouse at Flores St. and Peden Ave.; two stories; 100x350 feet; fireproof; reinforced concrete; cost \$90,000; plans by Atlee B. Ayres, San Antonio. (Previously noted.)

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Birmingham.—G. I. Brown, general manager of the Birmingham, Ensley & Bessemer Electric Railway Co., is quoted saying that its plans for extensions to Gadsden and Tuscaloosa have not been abandoned and something may soon be announced. The East Lake line is to be operated by February 15, and the line to Bessemer is being built as fast as possible.

Ala., Hayneville.—Walter S. Richardson of Montgomery, Ala., is quoted as saying that he and others, including Charles Schuessler of Lafayette, Ala.; H. H. McPherson of Tyson and the Russell estate of Hayneville are associated in plans for the improvement of the Hayneville & Montgomery Railway, nine miles long from Hayneville to Tyson, Ala., on the Louisville & Nashville Railroad.

Ark., Fayetteville.—Local capitalists are reported working on plans to construct a railroad 15 or 20 miles long to haul lumber from near Fayetteville to the St. Louis & San Francisco Railroad. The Board of Trade may be able to give information.

Fla., Pensacola.—The Gulf, Florida & Alabama Railway Co., of which R. C. Megargel, 35 Pine St., New York, is president, has, it is announced, issued \$1,500,000 of 5 per cent. bonds to extend its line northward from its present terminus in Alabama and to make improvements to its port facilities at Pensacola. G. A. Berry, Pensacola, Fla., is vice-president, general manager and chief engineer.

Fla., Ruskin.—George McA. Miller of Ruskin and others are reported interested in plans to build a railroad from Morris Park on the Seaboard Air Line to a lumber mill six miles distant. Altogether 20 miles of line are proposed, to be called the Ruskin-Morris Park Interurban Railroad.

Fla., Tampa.—Alexander Shane of Indianapolis, Ind., is reported contemplating construction of an interurban electric railway from Tampa to St. Petersburg, Fla., about 45 miles.

Fla., Tampa.—W. R. Rowland, counsel for the Tampa & Gulf Coast Railroad Co., is quoted saying that as soon as the charter is granted (in about six weeks) construction will begin. The extension will be down the

Pinellas peninsula to St. Petersburg, Fla. It is expected to complete this by the end of the year. J. T. Watson, Jr., of Tampa is vice-president and general manager.

Ga., Waycross.—Stockholders of the Waycross & Western Railway have voted an increase of stock from \$250,000 to \$710,000 and an issue of \$710,000 of bonds for the proposed line of 71 miles from Waycross southwest via Sirmans, Milltown and Ray's Mill. A. K. Sessions, Waycross, Ga., is president. He writes that the Empire Construction Co., which has the contract to build and equip 38 miles from Waycross to Sirmans, has completed 25 miles and turned 21 miles over to the railroad company. The rest is expected to be done in 90 days. The contractor will take the bonds and part of the stock in payment.

Ga., Savannah.—The Brinson Railway Co., it is reported, is formulating plans to build an extension beyond St. Clair, Ga., to which point an extension is now being constructed. George M. Brinson, Springfield, Ga., is president. It is further stated that James Imbrie of Wm. Morris Imbrie & Co., 45 Broadway, New York, has been elected chairman of the board, John H. Hunter vice-president and L. W. Tucker general manager. Headquarters are to be removed from Springfield to Savannah. The Savannah terminals are to be improved.

La., Donaldsonville.—Sol Wexler of New Orleans, who is reported contemplating construction of an electric railway from Donaldsonville to White Castle and Napoleonville, La., about 16 miles, and has made an offer to the Town Council for an electric franchise, is not, it is understood, ready to announce details of the plan.

La., New Orleans.—The Orleans-Kenner Electric Railway Co. is reported to have elected officers thus: A. Smith Bowman of New Orleans, president; J. D. Purcell of Lexington, Ky., vice-president; Andrew Fitzpatrick, second vice-president; E. F. Ulmer, secretary-treasurer. Other directors are Franklin Landis and A. M. Harbough, all of New Orleans. Mr. Bowman is president of the Bellevue Farms Co. and Mr. Harbough is connected with the Realty Realization Co. Line will be 10 miles long from New Orleans to Kenner, La.; route level. Date for construction.

struction bids not yet fixed. H. K. Johnson is chief engineer. Mr. Bowman's address is 304 Hibernia Bank Bldg., New Orleans.

Md., Baltimore.—President J. M. Fitzgerald of the Western Maryland Railway announces that the company has bought from the Winans Estate 90 acres of land adjoining its terminals at Port Covington, in the southern part of the city. The road has long contemplated enlarging the terminal by the erection of additional wharves, extension of yards, etc. H. R. Pratt, Baltimore, is chief engineer.

Md., Brunswick.—The Baltimore & Ohio Railroad Co. denies the recent press report that it would build a third track from Brunswick to Washington Junction, Md. It is not contemplated.

Mo., Moberly.—An officer of the Moberly, Huntsville & Randolph Springs Railway Co. is reported saying that contracts are to be awarded in April for the construction of the proposed line from Moberly to Huntsville and Randolph Springs, Mo., 12 miles. There will be several small bridges. C. H. Dameron is president and J. J. Munifinger chief engineer, both at Huntsville, Mo.

N. C., Charlotte.—W. S. Lee, vice-president, is reported saying that the Piedmont & Northern Lines plan an extension from Charlotte to Concord, about 22 miles. Address Charlotte, N. C. Mr. Lee writes that it is not contemplated to begin this work for some time.

N. C., Dunn.—The Durham & Southern Railroad, it is reported, is surveying for an extension from Dunn to Newton Grove, N. C., about 18 miles. J. E. Stagg is vice-president at Durham, N. C.

N. C., Elizabeth City.—W. I. Halstead, attorney for the promoter, gives notice that application will be made at the present session of the Legislature to charter a company to build a railroad from Elizabeth City via South Mills to Portsmouth, Va., about 40 miles, which will be operated by steam, electricity or other motive power.

N. C., Raleigh.—James H. Pou, lawyer, of Raleigh, says he cannot now announce plans for the Raleigh, Western & Atlantic Railroad Co., except that charter will be asked of and doubtless granted by the present Legislature. Organization will probably not take place for six months. The main object is to build a line from the Atlantic Coast Line to the Norfolk & Western Railway, 52 miles, with Raleigh half way.

N. C., Tryon.—Concerning a late press report that surveys were being made to relocate the Southern Railway line between Tryon and Saluda, N. C., to obtain an easier grade, W. H. Wells, chief engineer of construction, Washington, D. C., says surveys are being made to see what can be done to change grades and alignment, as at other points on the system for several years, but that no changes have been authorized.

Okla., Ardmore.—Reported that ground has been broken for the construction of the Oklahoma, New Mexico & Pacific Railway from Ardmore to Lawton, Okla., in which John Ringling of New York, Jake L. Hamon of Lawton and others are interested. Survey is in progress between Ardmore and Waurika.

S. C., Charleston.—According to a report quoting an officer, the Charleston-Isle of Palms Traction Co., now operating from Mt. Pleasant to the Isle of Palms, nine miles, will let contracts about July 1 for an extension from the Isle of Palms to McClellanville, S. C., about 27 miles. A connection with Charleston from Mt. Pleasant is also to be built, which will include a concrete bridge over the Cooper River about a mile. James Sottile is president and W. W. Fuller chief engineer, both at Charleston, S. C.

S. C., Greenville.—Ass G. Candier of Atlanta, who is a director in the Greenville & Knoxville Railroad, telegraphs the Manufacturers Record that survey is completed for the extension toward Knoxville, Tenn., and it is hoped to begin construction at an early date. J. R. Cothran, Greenville, S. C., is chief engineer.

S. C., Spartanburg.—Construction is advancing on the extension of the Greenville, Spartanburg & Anderson Railway (Piedmont Northern Lines) from Greenville to Spartanburg, 32 miles. The Parker Brooks Construction Co. has 17 miles, from Greenville to the South Tiger River, and has four heavy steam shovels at work; Willard Boggs & Co. have the next section, but work is temporarily checked by right-of-way litigation. J. Thomar Bennett has the section from Tucapau to Spartanburg and is operating three steam shovels. Completion of the extension is expected by early next fall.

Tenn., Chattanooga.—Kreiss Bros. & Deane of Knoxville are reported pushing work on their grading contract for the freight ter-

minial improvement in Chattanooga for the Southern Railway. Steam shovels are removing the earth (about 30,000 cubic yards), and their job may be done by March 1.

Tenn., Baileyton.—L. P. Campbell says that the people of Baileyton and vicinity are contemplating construction of a railway 15 miles long from there to Greenville, Tenn., and would like to have estimates and prices on material and equipment.

Tenn., Bristol.—Reported that Gen. James B. Cox of Knoxville and New York capitalists contemplate construction of an interurban electric railway from Bristol via Austin Springs to Johnson City, Tenn., about 25 miles. Ben. L. Dulancy of Bristol is reported interested. Chas. R. Cox is said to be getting rights of way.

Tex., El Paso.—Contract has been awarded by the Rio Grande Valley Traction Co. to Dudley & Orr of El Paso for the construction of its line from Washington Park at El Paso to Ysleta, 10 miles. H. M. Potter, manager of the El Paso Traction Co., will, it is understood, operate the new line, also a Stone & Webster property. Contract must be completed in 40 days.

Tex., Laredo.—The report that the Rio Grande & Eagle Pass Railway will be extended down the Rio Grande Valley to San Iordyce (15 miles) has been revived. C. B. Wright, 142 S. 3d St., Philadelphia, Pa., is president. R. W. Davis, Laredo, Tex., is chief engineer.

Tex., Fredericksburg.—R. A. Love, president of the San Antonio, Fredericksburg & Northern Railroad Co., is reported saying that the line now under construction from near Waring to Fredericksburg, Tex., will be extended from the latter point to either Brownwood, Brady or San Angelo, Tex. His address is San Antonio, Tex.

Tex., Galveston.—The Gulf, Colorado & Santa Fe Railway, according to a report quoting Vice-President F. G. Pettibone, will spend about \$1,500,000 during the year, including sidings and spur tracks, \$230,000; terminal yards, \$140,000; track fastenings and appurtenances, \$115,000; heavier rails, \$80,000; right of way and station grounds, \$50,000; bridges, trestles and culverts, \$50,000; additional main tracks, \$40,000, etc. F. Merritt, Galveston, Tex., is chief engineer.

Tex., Greenville.—J. W. Crotty, vice-president and general manager Eastern Texas Traction Co., Dallas, Tex., says, concerning the recent report, that an extension is proposed from Greenville to Bonham, Tex.; that the first of three preliminary surveys has just been started before attempting to locate a permanent line.

Tex., Plainview.—The Quanah, Acme & Pacific Railway has proposed to extend via Plainview on its way to Roswell, N. M., for terminal site, right of way through the county and a bonus of \$100,000. E. Dowden is chairman of a committee which has been appointed at Plainview. A. F. Sommer is engineer at Quanah, Tex.

Tex., Salesville.—The Gulf, Texas & Western Railway, according to a report from Austin, has amended its charter for an extension from Salesville to Mineral Wells, about eight miles. B. B. Cain, Dallas, Tex., is vice-president and general manager.

Tex., San Antonio.—W. B. Tuttle, vice-president, San Antonio & Austin Interurban Railway Co., says its plans are not sufficiently advanced to make announcement.

Va., Doswell.—Contract is reported awarded to Lane Bros. Co. of Altavista, Va., to build the Richmond, Washington & Chesapeake Railway from Doswell to Sandy Point, Va., about 82 miles, the contract price being \$1,400,000, and work to begin as soon as men and materials can be assembled. Channing M. Ward, 1106 E. Main St., Richmond, Va., is president and chief engineer of the railway company.

Va., Narrows.—Control of the New River, Holston & Western Railroad, 21 miles long from Narrows to Rocky Gap, Va., has, it is reported, been acquired by the Norfolk & Western Railway, with which the line connects at Narrows; also that an extension to coal lands is contemplated. F. E. Bastian, Narrows, Va., is general superintendent.

Va., Roanoke.—The Norfolk & Western Railway Co. announces that it proposes to complete double-tracking of its line all the way from Norfolk to the Ohio River by building 147 miles of second track. Heavier bridges will be erected. C. S. Churchill, Roanoke, Va., is chief engineer.

W. Va., Charleston.—The Charleston & Interurban Railway Co., it is reported, will build an extension to Montgomery, W. Va., about 25 miles, via Dana, Malden, Levi, Dickinson, Cedar Grove and Hughston. W. E. Chilton, Charleston, W. Va., is president.

W. Va., Union.—C. P. Lewis, County Surveyor of Monroe county, Sweet Springs, W. Va., says that the Tri-State Lumber Co., with headquarters at Unoltown, Pa., will build two inclines over Potts Mountain—one from Ray's Siding to the summit, 2194 feet, and the other from the summit (3400 feet) to near the foot of the height on the other side, connecting there with a narrow-gauge railroad two miles long, also to be constructed in Johns Creek Valley. B. A. Smith is president; J. H. Rush, vice-president; L. W. Fogg, treasurer, and D. D. Johnson, secretary. A trestle about 125 feet long and 35 feet high will have to be built.

W. Va., Morgantown.—S. D. Brady, chief engineer Little Kanawha Syndicate Lines (Buckhannon & Northern Railroad, etc.), says it may be some time before construction is begun upon assembling yards between Madsville and Jimtown, near Morgantown, or upon extensions into the interior of West Virginia. This refers to a late press report.

W. Va., Wheeling.—The West Virginia Traction & Electric Co., it is reported, will reconstruct its entire line from Wheeling to West Alexander, laying new and heavier rails; it will also build a reinforced concrete bridge near Langmeier's Station; it contemplates building a new track on Bow St. and the National road at Fulton, besides making other incidental improvements. Wm. Morris Imbrie & Co., 45 Broadway, New York, are interested.

STREET RAILWAYS

Ark., Little Rock.—The T. H. Bunch Coal Co. has applied for a franchise to build a street-railway line on about 20 streets and avenues. Horace Chamberlain, attorney-at-law; T. H. Bunch and others represent the proposition.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Abattoirs.—J. L. Morehead, chairman special committee, Durham, N. C., wants to correspond with manufacturers of insulation, refrigerating plants, rendering plants, overhead tracks, etc.; also with designers and constructors of abattoirs.

Bags, Cans, etc.—Cabot Coffee & Spice Co., Cabot, Ark., wants prices on bags, cans, boxes and labels.

Bakery Equipment.—Otto P. Stallings, Box 737, Tampa, Fla., wants addresses of manufacturers of portable metal ovens, such as used in bakeries.

Bakery Equipment.—City Baking Co., W. D. White, secretary, 509 Equitable Bldg., Baltimore, Md., wants prices on dough-handling and conveying machinery for bakery.

Boiler.—Bids received by Mayor and Board of Aldermen, Waycross, Ga., until 7:30 P. M. February 18 for boiler of horizontal return tubular type without dome; specifications on file at office of B. H. Klyce, City Engineer.

Brick, etc.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. February 25, then publicly opened, to furnish at Navy-yard, Washington, D. C., a quantity of naval supplies as follows: Schedule 5165, cable; schedule 5167, brick, stoneware clis, lime, brass valves. Applications for proposals should designate schedules desired by number. Blank proposals furnished upon application to bureau. T. J. Cowie, Paymaster-General, U. S. N.

Brick.—Bids received by Board of Commissioners of Public Works, D. B. McKay, chairman, Tampa, Fla., until 2 P. M. February 18 for maximum quantity of 5,000,000 or minimum of 500,000 paving brick, or any stated number between maximum or minimum, at option of bidder; delivered f. o. b. cars or wharf at rate of \$50.00 per month from date of contract; all bids to state number of brick guaranteed to lay a square yard; also dimensions of brick; inspection, Tampa; certified check for \$500; Allen Thomas, clerk.

Brick Machinery.—J. J. Swink, 1120 Union St., San Diego, Cal., wants prices on machinery for mud and pressed brick.

Brick Machinery.—E. J. Wiley Company (Rosenberg Brick & Tile Co.), 316 Southern Pacific Bldg., Houston, Tex., wants

Ark., Little Rock.—Charles J. Griffith, general manager of the Little Rock Railway & Electric Co., is quoted saying that the company contemplates spending in the next two years \$375,000 for improvements, including extensions.

Miss., Holly Springs.—E. G. Hammer is reported promoting plans for the construction of a street railway to be operated with storage battery cars.

N. C., Lexington.—The North Carolina Public Service Co., says a report, has been granted a 60-year franchise for a street railway in Lexington, work to begin within two years. Bled S. Coler, 43 Cedar St., New York, is president.

S. C., Spartanburg.—F. H. Knox, vice-president and general manager of the South Carolina Light, Power & Railway Co., is quoted saying that \$50,000 will be spent for improving the street railway in Spartanburg. This will include extension of tracks as well as additions to equipment.

Va., Staunton.—W. E. Moore, Pittsburgh, Pa., reported interested in the deal, wires that T. G. Basinger of Staunton, Va., bought the Blue Ridge Light & Power Co., controlling the street railway, for himself and associates, and it is proposed to make improvements. Mr. Basinger says that no plans have yet been made for the development of the property.

W. Va., Princeton.—President S. J. Evans of the Princeton Power Co., is quoted confirming report that plans are in progress for the construction of an electric railway between Princeton and Bluefield, seven miles.

W. Va., Wheeling.—The Wheeling Traction Co., it is reported, proposes an extension from Barton to St. Clairsville, five miles.

prices on equipment and materials for \$50,000 brick and tile plant at Rosenberg, Tex.

Bridge Construction.—Board of (Johnston) County Commissioners, Smithfield, N. C., receive bids February 17 on two iron bridges; one 210 feet and one 190 feet long; plans submitted.

Bridge Construction.—Commercial Club, Frank W. Buffum, president, Louisiana, Mo., desires to correspond with bridge builders relative to constructing bridge across Mississippi River of sufficient strength to carry trolley cars.

Bridge Construction.—Bids received at 12 noon February 11 at Lawrenceville, Va., for erection of standard 80-foot span bridge, with 12-foot roadway, across Waqua Creek; old masonry encased in concrete; substructure to include tearing down present bridge; plans and specifications with Clerk of Circuit Court, Lawrenceville; blueprints obtainable from Childrey-Sunday Company, Richmond, Va., at cost of 20 cents per set; P. S. J. Wilson, State Highway Commissioner.

Broom Machinery.—L. Ambrose, La-grange, Ga., wants equipment for small broom factory.

Building Materials.—Scott Bros., 213 S. Main St., Cleburne, Tex., wants prices on building materials.

Building Materials.—J. A. Thompson, Middlesboro, Ky., wants prices on brick and other building materials for store and dwelling.

Building Materials.—D. N. Combs & Son, Horse Cave, Ky., want prices on plumbing and fixtures, lumber, brick, roofing, etc., for \$16,908 school building.

Building Materials.—John G. White, Grover, N. C., wants catalogues and prices on metal columns and supports for store front; also wants prices on plate glass and building brick.

Building Materials.—Wilson Hardware Co., Bartow, Fla., wants prices on metal ceiling, roofing and plate glass.

Building Materials.—M. C. Franklin, Roanoke, Va., wants prices on building materials for \$10,000 apartment-house.

Building Materials.—Chamberlain & Galespie, Jacksonville, Fla., wants prices on steel and iron, terra-cotta, plate glass and metal sash bars.

Building Materials.—Brickey & Brickey, Praetorian Bldg., Dallas, Tex., want to correspond with dealers in and manufacturers of building materials with view to securing supplies for erection of 10-story store building for Dallas Dry Goods Co., to cost \$300,000.

Canning Machinery and Supplies.—Mutual Canning Co., E. M. Benson, Adel, Ga., wants prices on canning machinery and supplies.

Canning Machinery.—Landing Neck Canning Co., Trappe, Md., will receive bids on canning machinery for plant to have daily capacity of 10,000 to 20,000 cans of tomatoes.

Canning Supplies.—Mobile Sugar Development Co., G. E. Nesom, general manager, Mobile, Ala., will purchase canning supplies, including cans, labels, packing cases and corn syrup.

Castings for Valve Machine, etc.—Office of Purchasing Agent, Commissioners of District of Columbia, Washington, D. C. Proposals received until February 4 for furnishing 10 sets cast-iron castings for valve-operating machinery; also for furnishing 7500 feet No. 4 solid copper wire f. o. b. Washington. For further information address purchasing agent.

Church Furniture.—Woodland Heights Methodist Church, E. C. Lamb, chairman of building committee, Houston, Tex., will want furniture for \$10,000 church building.

Cold-storage Machinery.—W. Fulton, Mt. Airy, N. C., wants prices on machinery and equipment for cold-storage plant.

Concrete Culverts.—See "Road Machinery, etc."

Concrete Mixer.—Double Shoals Cotton Mills, Route 6, Shelby, N. C., wants second-hand small power concrete mixer.

Cotton Compress.—Board of Trade, R. D. Sterne, secretary, Cooper, Tex., wants to correspond with manufacturers of compresses or other parties interested in building compress at Cooper.

Cracker Machinery, etc.—G. H. Christensen, De Witt, Iowa, wants cuts, prices and plans for equipment and building for cracker factory, Miami, Fla.

Crusher.—Double Shoals Cotton Mills, Route 6, Shelby, N. C., wants second-hand medium weight rock crusher.

Derrick.—St. Elmo Quarry Co., L. E. Hunt, 425 Woodruff Bldg., Springfield, Mo., wants prices on 20 to 30-ton derrick.

Dies.—Liquid Dispenser Manufacturing Co., Real Estate Bldg., St. Louis, Mo., wants bids from die casting companies on special die mold work.

Ditching Machinery.—D. M. Reaves, Spartanburg, S. C., wants to correspond with manufacturers of machines to cut ditch two feet wide and four to eight feet deep, delivering dirt 10 to 12 feet to the left; view to representation in South Carolina.

Drainage and Levee.—Bids received until noon February 21, Union City, Tenn., for about 314,500 cubic yards levee work, 178,000 cubic yards ditch work, clearing and grubbing six miles levee base and constructing two concrete sluiceways with automatic back-water gates; certified check for \$6000; specifications on application to J. A. Coble, secretary board of directors, Obion River Drainage District No. 2.

Drainage.—Commissioners of Drainage District No. 2 of Tunica, Quitman and Panola counties, Mississippi, receive bids until 2 P. M. February 18 at Crenshaw, Miss., for following work: 14,458 cubic yards of embankment and 61,014 cubic yards of excavation; bids will be accepted for work as a whole or for either part thereof; certified check for not less than 10 per cent. of amount of bid; plans, specifications, etc., may be secured at office of Board of Commissioners and of Morgan Engineering Co., 608 Goodwyn Institute Bldg., Memphis, Tenn.

Dredging.—U. S. Engineer's Office, Savannah, Ga. Proposals for dredging in waterway between Savannah, Ga., and Fernandina, Fla., Club and Plantation creeks, Georgia, and harbor at Brunswick, Ga., received until 12 noon (Eastern Standard Time) March 4, then opened. Information on application. Dan C. Kingman, Colonel, Engineers.

Dredging Machinery.—H. L. Millner, Morganton, N. C., wants prices on gold-dredging machinery.

Dredging.—U. S. Engineer Office, Charleston, S. C. Proposals for dredging Sampit Bar and River, Winyah Bay, South Carolina, received until noon February 26, then opened. Information on application. G. P. Howell, Major, Engineers.

Dynamite, Piping, etc.—Sealed proposals received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. February 26, then publicly opened, for furnishing dynamite, steel pipe, valves, back-

saw blades, solder, stable brooms, chinaware, glassware, mess-kit cups, oilcloth, canvas, candles, fire-clay, long-leaf yellow pine and white oak lumber, and cross-ties. Blanks and general information relating to this circular (No. 761) may be obtained from this office or offices of Assistant Purchasing Agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 N. Point St., San Francisco; also from United States Engineer Offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash. F. C. Boggs, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Electric-light Plant.—See "Water-works," "Electric-light Plant" and "Sewers."

Electric-light System.—See "Water-works, Electric-light and Sewer Construction, Wynne, Ark."

Electric Wiring.—See "Heating, Plumbing, etc."

Electrical Commission Supplies.—Proposals invited on furnishing for use of Electrical Commission, in accordance with specifications by chief engineer of commission, following materials: 1,000,000 duct feet, more or less, vitrified tile conduit; 200,000 feet, more or less, special duct pipe, including bends; certified check for vitrified tile

five-horse-power electric motor, 110 volts, direct connected, single phase, low speed.

Electrical Machinery, etc.—Ernest Phillips, Buckhannon, W. Va., wants prices on dynamo for lighting country home, barn, etc.; also on water-power motor or wheel to propel dynamo.

Electrical Machinery.—Bluegrass Dairy & Ice Co., Lancaster, Ky., wants prices on direct-connected engine and dynamo of 5 to 10 kilowatts capacity.

Electrical Machinery.—City of Sulphur Springs, Mo., will purchase 75-horse-power engine (high speed), three-phase 60-kilowatt generator, switchboard, boilers, heaters, steam lines, stack and motors.

Elevator.—Commercial Investment Co., R. J. Corbett, director, Moultrie, Ga., wants prices on elevator for four-story building.

Engine.—Eastland Light & Power Co., A. A. Abney, manager, Eastland, Tex., will want prices on 50 to 75-horse-power oil or gasoline engine.

Engine.—See "Electrical Machinery."

Engines.—Falls City Construction Co., Louisville, Ky., wants second-hand 250-horse-power Corliss engine.

Feed Mill Machinery.—O. H. Bowen, 1115 Empire Bldg., Birmingham, Ala., wants prices on machinery for plant to manufacture mixed feed.

Foundry Equipment.—W. P. Biddle, 110 E. Vine St., Knoxville, Tenn., will purchase new and used machinery for plant to manufacture steel ranges, including punches,

received at office of Frank W. Keating, M.D., superintendent Rosewood State Training School, Owings Mills, Md., until February 12 for heating, electric wiring and plumbing for dormitory in accordance with drawings and specifications prepared by Elliott & Emmart, architects, 1101 Union Trust Bldg., Baltimore, Md., and Charles L. Reeder, consulting engineer, 921 Equitable Bldg., Baltimore; certified check for \$250.

Ice Machinery.—Beare Bros. Ice & Coal Co., Jackson, Tenn., wants prices on ice crusher for meat car icing and ice chain conveyor.

Lighting Fixtures.—G. J. Herndon, Ehrhardt, S. C., wants prices on lighting fixtures.

Locomotives.—Proposals endorsed "Proposals for Locomotives" received at Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 A. M. March 1, then opened, for one narrow-gauge and two standard-gauge saddle-tank switching locomotives delivered at naval station, Pearl Harbor, Hawaii. Specification can be obtained on application to bureau or to commandant of naval station named. H. R. Stanford, chief of bureau.

Locomotive.—Roanoke River Log Co., Lewiston, N. C., may purchase locomotive.

Locomotive Reamers.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. February 25, then publicly opened, to furnish at Navy-yard, Charleston, S. C., a quantity of locomotive reamers. Applications for proposals should refer to schedule 5174. Blank proposals furnished upon application to navy pay office, Charleston, S. C., or to bureau. T. J. Cowie, Paymaster-General, U. S. N.

Lumber.—See "Dynamite, Piping, etc.—Isthmian Canal."

Marble Works Equipment.—J. A. Moore & Co., J. A. Moore, president, Canton, Ga., opens bids March 1 to install electric motor, air compressor, air receiver, emery stand and pneumatic tools for marble plant at Lagrange, Ga.

Metal Buttons.—Fetherwate Garter Co., 215 Evans Bldg., Washington, D. C., wants addresses of manufacturers of metal buttons and attached eyelets.

Metal-bending Machinery.—Wilmington Iron Works, foot of Orange St., Wilmington, N. C., wants prices and catalogues on angle and ring benders.

Metal Rims, etc.—Thomas Howard, 515 Crittenden St., Owensboro, Ky., wants to correspond with manufacturers of metal bicycle rims; wants special rims made of metal; also special metal bands to lamp rim of ordinary bicycle.

Mining Machinery.—Francis Coal & Coke Co., V. E. Goeke, manager, Clarksburg, W. Va., will open bids in 30 days for electrically-operated machinery.

Motor Trucks.—Texas Motorway Co., C. L. Cade, engineer in charge, 511 Sumpter Bldg., Dallas, Tex., wants prices on motor trucks for passengers and freight.

Naval Supplies.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., T. J. Cowie, Paymaster-General, United States Navy, receives bids until March 25 for furnishing four ventilating steel-plate blowers, schedule 5162; 1000 feet rubber hose and 400 gallons of castor oil, schedule 5176; 6500 feet upper deck fire hose and fittings, 153 feet suction hose with fittings, schedule 5172; delivery Navy-yard, Norfolk, Va.; for schedules apply to navy pay office nearest navy-yard.

Nursery Supplies, etc.—K. O. Knudson, Clifton, Tex., wants catalogues from nurserymen on pecan, fig and orange trees, etc.

Paper-box Machinery.—J. Homer Oulla, 315 N. Main St., Anderson, S. C., wants information and prices on machinery and supplies for manufacturing paper boxes of all varieties.

Paving.—Proposals received at office of Dan C. Smith, Jr., City Secretary, Houston, Tex., until 12 noon February 10 for following grading and paving: On Hogan and Lorraine Sts., 5-inch concrete base, with naphtha paint coat, and 2-inch Texaco sheet asphalt surface; Washington St., No. 1 repressed vitrified brick; La Branch St., creosoted wood blocks; Burlington St., bitulithic pavement; certified check for 10 per cent. cost of construction; specifications and information obtainable on application at office of F. L. Dormant, City Engineer; H. B. Rice, Mayor.

Paving, etc.—Bids received by Julien Smith, City Engineer, Selma, Ala., until noon February 7 to lay about 28,000 yards of either asphalt, wood block or hassam pavement on concrete foundation on Lauderdale St. and Dallas Ave., together with necessary storm sewers, manholes, curbing, inlets,

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conduit, \$500; special duct pipe and bends, \$200; also invites bids on sand, gravel, brick, lumber, hauling bulk material and manhole frame castings; certified check for manhole frame castings, \$200; for sand, gravel, brick, lumber and hauling bulk material, each \$100; bids received by Richard Gwinn, City Register, City Hall, Baltimore, Md., before 11 A. M. February 12; for specifications, etc., apply to Raleigh C. Thomas, chief engineer.

Electrical Equipment.—City of Jonesboro, Ga., E. W. Hutcheson, chairman of Electrical Commission, wants prices on transformer, wire, poles, etc., for small transformer station.

Electrical Equipment.—Siler City Light & Telephone Co., J. Wade Siler, secretary-treasurer, Siler City, N. C., wants prices on 50-kilowatt generator, 3-phase 60-cycle 2300-volt switchboard, exciter, etc.; transformers and meters; also 10 miles No. 6 B. & S. gauge bare copper wire, 15 miles No. 9 B. & S. gauge standard weatherproof, 5 miles No. 12 and 5 miles No. 16 rubber-covered copper wire.

Electrical Fixtures.—Commercial Investment Co., R. J. Corbett, director, Moultrie, Ga., wants prices on electrical fixtures for four-story store and office building.

Electrical Machinery.—Falls City Construction Co., Louisville, Ky., wants second-hand motors, both alternating and direct current, 5 to 150 horse-power, good condition; also alternating and direct-current generators.

Electrical Machinery.—Beare Bros. Ice & Coal Co., Jackson, Tenn., wants prices on

square, shears, brake tumblers and exhaust fan.

Furniture.—E. P. Wichman, care of Ehrhardt Hardware Co., Ehrhardt, S. C., wants prices on furniture for six-room dwelling.

Glove Machinery and Material.—E. G. Bradley, Citronelle, Ala., wants to correspond with manufacturers of equipment and materials for manufacturing cotton flannel gloves.

Granite Curbing.—Mayor and Board of Aldermen, Waycross, Ga., will receive bids on furnishing f. o. b. cars Waycross about 21,000 linear feet granite curbing; specifications on file at office of B. H. Klyce, City Engineer.

Granite Curbing.—Bids received by Board of Commissioners of Public Works, D. B. McKay, chairman, Tampa, Fla., until 2 P. M. February 18 for 10,000 to 50,000 linear feet granite curbing, delivered cars, Tampa, at rate of 5000 linear feet per month from date of contract; certified check for \$500; Allen Thomas, clerk.

Heating Plant.—A. J. Keynton, Pensacola, Fla., wants prices on hot-water boiler, radiators, etc., for apartment-house, 35x70 feet.

Heating Plant.—D. N. Combs & Son, Horse Cave, Ky., want prices on heating plant for \$16,905 school building.

Heating Plant.—Commercial Investment Co., R. J. Corbett, director, Moultrie, Ga., wants prices on heating plant for four-story building.

Heating, Plumbing, etc.—Proposals

etc.; plans and specifications on file in City Engineer's office; certified check for \$1000.

Paving.—Proposals received until 5 P. M. February 10 at office of Chas. W. Owens, architect, 1007 Commercial National Bank Bldg., and opened at meeting of board of trustees, for construction of concrete driveway and pavement at Charity Hospital, Texas Ave. and Murphy St., Shreveport, La.

Paving.—Bids received until February 27 for furnishing material and laying 2000 yards granolithic walk; specifications at office of J. R. Gregory; bids also received for labor and work, town to furnish material. Address J. T. Penn, chairman board of managers, Martinsville, Va.

Paving.—Bids received until 9.30 A. M. February 7 at office of City Auditor, Tulsa, Okla., for constructing certain concrete sidewalks; excavation and grading for sidewalks will be done by city; certified check for 5 per cent. amount of bid; T. C. Hughes, City Engineer.

Paving.—Proposals received at office of Board of Public Works, City Hall, Louisville, Ky., until 2 P. M. February 11, then opened, for following paving contracts: Letting No. 479, sheet asphalt, creosoted wood block or vitrified block pavements (proposals may be made on one or more of these classes of pavement), two contracts, 18,350 square yards; letting No. 480, sheet asphalt pavement, four contracts, 19,075 square yards; letting No. 481, vitrified block pavement, four contracts, 19,075 square yards; letting No. 482, sheet asphalt pavement, four contracts, 11,800 square yards; letting No. 483, vitrified block pavement, 16 contracts, 27,615 square yards; letting No. 484, vitrified block alley pavement, seven contracts, 3570 square yards; letting No. 485, concrete sidewalk pavement, 29 contracts, 6740 square yards; certified check for amount shown on the plans; specifications, plans, proposals and contracts obtainable upon application to undersigned upon deposit of certified check or money order for \$1; in asking for plans, etc., please specify by above numbers letting or lettings wanted; plans and specifications on file in office of engineering and contracting; D. R. Lyman, chief engineer.

Paving.—Bids received at office of C. R. Goucher, City Clerk, Oklahoma City, Okla., until 1.30 P. M. February 11 for resurfacing with asphaltic concrete intersection of 12th St. and Hudson Ave., total width of 30 feet, and necessary work to be done in removal of brick crosswalks, etc.; certified check for 3 per cent. of amount of bid.

Paving.—City of Greenville, Tex., receives bids until 2 P. M. February 11 for paving portions of various streets; improvements include three-inch creosoted block pavement on four-inch concrete foundation, with concrete gutters along curb line 18 inches wide; 2½-inch creosoted wood-block pavement on four-inch concrete foundation, with concrete gutters along curb line 18 inches wide; vitrified brick pavement from curb to curb on four-inch concrete foundation; vitrolithic concrete pavement; bitulithic pavement on four-inch concrete foundation, with concrete gutters along curb line 18 inches wide; dolarway concrete pavement; concrete pavement, with bituminous rock wearing surface; concrete curb on curb line; W. A. Frazer, City Clerk.

Paving and Curbing.—Mayor and Board of Aldermen, Waycross, Ga., receive bids until 7.30 P. M. February 18 for Albany Ave. improvements, including laying (blocks already purchased) of 6000 square yards asphalt blocks on sand foundation, and construction of 4500 linear feet granite or concrete curbing; plans and specifications with City Engineer, B. H. Klyce.

Piping.—Bids received until 8 P. M. February 6 by Board of Water Commissioners, Charlotte, N. C., for laying 3500 feet of eight-inch water mains and 575 feet of six-inch water mains as laterals in East Boulevard between Avondale Ave. and city limits; plans and specifications on file in superintendent's office, No. 6 City Hall; W. E. Vest, superintendent.

Plumbing.—G. J. Herndon, Ehrhardt, S. C., wants prices on toilet fixtures for bathtub, etc.

Plumbing.—John S. Gibson, Hoxie, Ark., is asking bids on 52 lavatories for hot and cold water.

Printing Machinery.—Imperial Publishing Co. (Khosla Bros.), Lahore, India, wants up-to-date printing, bookbinding and lithographing machinery, press and cutting machines, and job and book printing types for printing press; wants to correspond with manufacturers.

Pump.—Beare Bros. Lee & Coal Co., Jackson, Tenn., wants prices on deep-well pump.

Pump.—City of Paducah, Ky., T. N. Hazell, Mayor, wants prices on sewer pump.

Pumps and Valves.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. March 5, then publicly opened, to furnish at Navy-yard Puget Sound, Wash., a quantity of naval supplies as follows: Schedule 5163, fuel-oil pumps; schedule 5179, composition valves. Application for proposals should designate schedules desired by number. Blank proposals furnished upon application to navy pay office, Seattle, Wash., or to bureau. T. J. Cowle, Paymaster-General, U. S. N.

Quarrying Equipment.—St. Elmo Quarry Co., L. E. Hunt, president, 425 Woodruff Bldg., Springfield, Mo., wants prices on stone channeller and stone gang saws.

Railroad Construction Material, etc.—L. P. Campbell, Balleaton, Tenn., wants estimates on material and equipment for proposed 15-mile railway from Balleaton to Greenville, Tenn.

Refrigerating Plants.—See "Abattoir."

Road Construction.—Texas Motorway Co., G. L. Cade, engineer in charge, 511 Sumpster Bldg., Dallas, Tex., opens bids about February 15 to construct 60 miles of rock ballast road between Dallas and Glen Rose, Tex.

Road Machinery, etc.—Bids received at office of John V. Huntress, County Auditor, Austin, Tex., until 11 A. M. February 10 for complete road outfit, consisting of combination traction engine and road roller, to burn either gasoline or kerosene oil; road grader, road plow, road scarifier and road drags, laid down in Bexar county and tested in actual road work to satisfaction of Commissioners' Court; also for building concrete culverts on county roads; plans and specifications on file in county auditor's office for concrete culverts.

Road Machinery.—J. B. Howie, Gulfport, Miss., wants prices on road machinery.

Roofing.—Navy Department, Bureau of Yards and Docks, Washington, D. C., receives bids until March 1 for tar and felt roof for buildings for navy-yard at Norfolk, Va.

Roofing.—Proposals endorsed "Proposals for Roof Covering for Buildings" received at Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 A. M. March 1, then opened, for tar and felt roof for buildings at Navy-yard, Norfolk, Va. Specifications obtainable on application to bureau or to commandant of navy-yard named. H. R. Stanford, chief of bureau.

Sash and Door Manufacturers.—Moore Door Building Device Co., H. E. Moore, president, 157 Elizabeth St., Atlanta, Ga., wants to correspond with sash and door manufacturers.

Sawmill.—Morris Lewin & Bro., Jaffa, Palestine, Asiatic Turkey, want information, illustrations and prices on moderate-sized sawmill for eucalyptus wood.

Seawall.—City Bond Commission, Joseph F. Caseneuve, chairman, Bay St. Louis, Miss., invites bids until 7.30 P. M. February 25 for constructing concrete seawall along front of city from south end of present concrete wall to north end of St. Stanislaus College breakwater, about 1500 feet; plans and specifications obtainable on application to R. F. O'Brien, clerk of Bond Commission, not later than February 11, on deposit of \$2.50; bids opened publicly at meeting at city hall at 8 P. M. February 25.

Sewer Construction.—See "Water-works, Electric Lights and Sewer Construction, Wynne, Ark."

Sewer Construction.—City of Maplewood, Mo., opens bids February 11 to construct 100 feet 36-inch brick sewers, 200 feet 27-inch, 600 feet 24-inch, 800 feet 21-inch, 490 feet 18-inch and 5600 feet 12-inch pipe sewers; S. W. Shinkle, City Engineer.

Safe.—See "Store Fixtures."

Sewer Construction.—Bids received at office of Board of Public Works, D. B. McKay, chairman, Tampa, Fla., until 2 P. M. February 18 for construction of system of reinforced concrete storm drains in Hyde Park; \$300 certified check; Allen Thomas, clerk Board of Public Works.

Sewer Construction.—See "Water-works, Electric-light Plant and Sewers."

Sewage Disposal Tanks.—F. Z. Bishop, Room F, Gugenheim & Cohn Bldg., Corpus Christi, Tex., wants to correspond relative to sewage disposal tanks; plans specifications and prices.

Shears.—A. J. Twigg & Son, Augusta, Ga., want prices on shears; No. 10 Edwards preferred.

Shingles.—F. P. Wichman, care of Ehrhardt Hardware Co., Ehrhardt, S. C., wants prices on metal shingles.

Slate Work.—Proposals, addressed to Board of Awards, and marked "Bids for Fur-

nishing and Installing Slate Work at Walters Baths, No. 4," received at office of City Register, City Hall, Baltimore, Md., until 11 A. M. February 12 for slate work in new bath and laundry cabins at Walters Baths, No. 4, West and Marshall Sts.; specifications at office of Free Public Bath Commission, Wm. H. Morris, treasurer.

Sluiceways, etc.—Proposals endorsed "Bids for Sluiceways Improvement of Gunpowder Supply, Contract No. 8," for furnishing 10 sluiceways and appurtenances at Loch Raven, plans on file in office of Water Engineer, City Hall, Baltimore, Md., received until 11 A. M. February 12, then opened; plans and specifications obtainable at office of Ezra B. Whitman, Water Engineer; charge of \$5 for each set of plans; certified check \$500; following quantities needed: Four 42x72-inch sluiceways and appurtenances; two 48-inch diameter and four 24-inch diameter sluiceways and appurtenances; additional items may be needed, as 200 linear feet additional 3¼-inch gate stems with couplings, 172 linear feet additional 2¼-inch gate stems, 24 additional guides for 3¼-inch stems and 8 additional guides for 2¼-inch stems.

Store Fixtures.—Wilson Hardware Co., Bartow, Fla., wants prices on iron safe, showcases and other store fixtures.

Structural Steel.—Proposals for structural steel for administration building received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. March 6, then publicly opened. Blanks and general information relating to this circular (No. 760) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1088 North Point St., San Francisco; also from U. S. Engineer offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash. F. C. Boggs, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Structural Steel.—Proposals received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. February 25, then opened in public, for furnishing structural steel. Blanks and general information relating to this circular (No. 759) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1088 North Point St., San Francisco; also from U. S. Engineer offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash. F. C. Boggs, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Water-works, Electric-light Plant and Sewers.—Proposals received by Mayor and Board of Commissioners, Clayton, N. C., until 3 P. M. February 25 for building water-works and electric-light plant and sewerage system; water-works will embrace fireproof building, power pumps, clear-water basin and about four miles of 6, 8 and 10-inch water-pipe laying, with hydrants and valves; electric-light plant will consist of about five miles of pole lines and 100-kilowatt transformer station; sewerage will include about three miles of pipe sewers, 8 inches to 15 inches diameter, and appurtenances; plans and specifications on file at office of E. L. Hinton, Mayor, at Clayton, and at office of engineer, Gilbert C. White, Charlotte, N. C.; certified check for not less than 5 per cent. of bid, but not less than \$250.

Water-works, Electric Lights and Sewer Construction.—Proposals received by Board of Commissioners, Water and Light District No. 2 and Sanitary Sewer District No. 1, Wynne, Ark., until 1.30 P. M. February 24, then opened, for following: One artesian well; electric motor and pump erected in pump pit; power-house extension; 12,000 feet 8-inch, 11,900 feet 6-inch and 8300 feet 4-inch C. I. W. P. line; 41 standard fire hydrants; 25 valves; two high-speed engines; one H. R. T. boiler; two generators; switchboards; street-lighting system; five miles pole-line construction; transformers and supplies; 5620 feet 15-inch, 9650 feet 12-inch, 2650 feet 10-inch, 16,600 feet 8-inch and 13,300 feet 6-inch sewer pipe; 73 manholes; two special manholes; 40 lamp holes; 24 flush tanks; these quantities approximate; plans and specifica-

tions at offices of secretary of board of commissioners and of consulting engineers, R. C. Huston & Co., 630 Exchange Bldg., Memphis, Tenn., after February 10, and will be mailed on payment of \$5; certified check for not less than 5 per cent. amount of bid to accompany bid; Geo. E. Davis, chairman; Ed. Hamilton, member; C. B. Bailey, secretary.

Wire.—A. J. Twigg & Son, Augusta, Ga., want prices on No. 12 gauge galvanized wire in car lots.

Wood-pipe Manufacturers.—W. W. Barber, Edgemont, N. C., wants addresses of wood-pipe manufacturers.

Woodworking Machinery.—Double Shoals Cotton Mills, Route 6, Shelby, N. C., wants second-hand light wood planer, single surfacer and matcher, capable of dressing lumber three inches thick and 12 to 14 inches wide.

Woodworking Machinery.—Willingham Sash & Door Co., Macon, Ga., wants second-hand S. A. Woods Machine Co.'s No. 24 matcher, 15x6, in good condition.

Woodworking Machinery.—Stovall Broom Works, Stovall, N. C., wants prices on second-hand machine for turning broom handles.

FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS RECORD,

Baltimore, Md., February 5.

There was a fair amount of business in the Baltimore stock market during the past week, and prices were generally sustained. In the trading United Railways common sold from 23½ to 23¾; do. income bonds, 62½ to 63¼, with last sale at 63; do. funding 5s, 87 to 87½; do. notes, 100½; do. 4s, 84½ to 85; United Electric Light & Power 4½s, 93; Consolidated Gas, Electric Light & Power common, 119 to 118½; do. preferred, 119½ to 120½, with last sale at 120; do. 4½s, 89¾ to 90; do. notes, 99¾; Consolidated Gas 5s, 107¼; Seaboard Air Line common, 21 to 20; Mt. Vernon-Woodberry Cotton Duck 5s, 77½ to 76½, with last sale at 77; G.-B.-S. Brewing common, 3; do. income bonds, 10; do. 4s, 48.

Bank stock sold as follows: Merchants-Mechanics, 31½ to 33, with last sale at 32½; Western, 39½ to 40; Union, 137½ to 140; Commerce, 32; Bank of Baltimore, 163 to 164; Mercantile Bank, 43; National City, 108.

Mercantile Trust sold at 160 and 161; Baltimore Trust, 159; Fidelity & Deposit, 177½ to 176¼; Munsey Trust, 101 to 102; Continental Trust, 216 to 218; Maryland Casualty, 106; United States Fidelity, 193.

Other securities were traded in thus: Houston Oil common, trust certificates, 19½ to 20¼, reacting to 19; Houston Oil preferred, trust certificates, 64½ to 64; do. dividend certificates, 80 to 81½; Baltimore City 4s, 1920, 98¼; do. 3½s, 1980, 85¼; do. 4s, 1958, 96¼; do. do. 1957, 97; do. do. 1951, 96¼; do. 3½s, 1928, 93; do. do. 1930, 92; Macon Railway & Light 5s, 98½; Northern Central Railway stock, 122¼ to 122; Virginia Railway & Power 5s, 94¼; Atlantic Coast Line rights, 2½ to 3¼; Baltimore Electric preferred, 46¼ to 46½; do. 5s, stamped, 98¾ to 99¾; Fairmont Coal 5s, 96¼; Georgia & Alabama Consolidated 5s, 105¼ to 105; Merchants & Miners' Transportation Co. voting trust, 69¼ to 69¾; Pennsylvania Water & Power common, 70 to 69½; do. 5s, 93¾; Atlantic Coast Line of Connecticut 5s, certificates, 104; Columbia & Greenville 1st, 104; Georgia, Carolina & Northern 5s, 105¾ to 105; Georgia Pacific 1st, 110; Macon, Dublin & Savannah 5s, 99¼; Atlantic Coast Line convertible debenture 4s, 99¼ to 98¾; Consolidation Coal refunding 5s, 93 to 93¼; Kentucky Securities preferred, 71½ to 72½; Jamison Coal & Coke (George's Creek) 5s, 94; Norfolk & Portsmouth Traction 5s, 91½; Norfolk Railway & Light common,

26½; Virginia Midland 4th, 103¼; Maryland 4th, 1928, 98¾; Minneapolis & St. Paul joint 5th, 103¼; City & Suburban (Baltimore) 5th, 105; Danville Traction & Power 5th, 94½ to 94¼; Fairmont & Clarksburg Traction 5th, 101; Baltimore Brick preferred, 25; Charleston City Railway 5th, 103¼; Norfolk & Atlantic Terminal 5th, 94 to 94¼; Pullman Ventilator preferred, 5; Baltimore, Sparrows Point & Chesapeake 4½s, 95¾; Maryland Electric 5th, 97½; Consolidation Coal, 102¾; German Fire Insurance, 19; Wilmington & Weldon 5th, 109¼; Anacostia & Potomac 5th, 98½ to 98¾; Jacksonville Gas 5th, 96; Gary & Interurban 6th, notes, 98½; New Orleans, Mobile & Chicago 5th, 86¼; City & Suburban (Washington) 5th, 103¼; Milwaukee Refunding 4½s, 94; Chicago Railways 5th, 100¼ to 100%; Baltimore Traction 5th, 105¾; Alabama Midland 5th, 106¾; Norfolk Railway & Light 5th, 100; Baltimore Brick common, 2¼; Virginia Railway & Power common, 55; Davidson Chemical 6th, 99¾; Consolidation Coal refunding 4½s, 92.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended February 5, 1913.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	131	131
At. Coast of Conn.....	100	258	262
Georgia Southern & Fla.....	100	30	35
Ga. Son. & Fla. 2d Pfd.....	100	80½	81½
Norfolk Railway & Light.....	100	25	27½
Seaboard.....	100	19¾	20½
Seaboard Pfd.....	100	47¾	48½
United Rys. & Elec. Co.....	100	23¾	23¾
Virginia Ry. & P. Com.....	100	54	55
Virginia Ry. & P. Pfd.....	100	91¾	92
Western Maryland.....	100	44	45½

Bank Stocks.	Par.	Bid.	Asked.
Bank of Baltimore.....	100	164½	165
Bank of Commerce.....	100	15	31¼
Citizens.....	100	42½	42½
Drovers & Mechanics.....	100	218	225
Farmers & Merchants.....	100	144	49½
First National.....	100	105	105
German.....	100	19	14½
Howard.....	100	30	43
Marine.....	100	20	22
Maryland.....	100	10	32½
Merchants-Mechanics.....	100	10	10
National City.....	100	10	10
Old Town.....	100	10	10
Second National.....	100	10	10
Union.....	100	137½	141
Western.....	100	20	39

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
Baltimore Trust.....	100	100	100
Colonial Trust.....	100	28½	29½
Continental Trust.....	100	217	218
Equitable Mortgage & Trust.....	100	124	125
Fidelity & Deposit.....	100	176¾	176¾
Fidelity Trust.....	100	240	250
Maryland Casualty.....	100	25	105
Maryland Trust.....	100	118	123
Merc. Trust & Dep.....	100	55	100½
Munsey Trust.....	100	100	102
Union Trust.....	100	50	62
U. S. Fidelity & Guar.....	100	196	200

Miscellaneous Stocks.	Par.	Bid.	Asked.
Baltimore Brick.....	100	2½	2½
Baltimore Brick Pfd.....	100	26	46½
Baltimore Electric Pfd.....	100	136	136
Canton Company.....	100	118½	118½
Con. Gas, Elec. Lt. & P. Com.....	100	119	120
Con. Gas, Elec. Lt. & P. Pfd.....	100	102	102¾
Consolidation Coal.....	100	3	3¼
G. B. S. Brewing Co.....	100	1½	2
George's Creek Coal.....	100	69	69
Mer. & Min. Trans. Co. V. T.....	100	100½	108½

Railroad Bonds.	Par.	Bid.	Asked.
Alabama Midland 5th.....	100½	108½	108½
Atlantic Coast 1st 4th.....	100	95	95
At. Coast Conv. Deben 4th.....	100	98½	99½
At. Coast Conv. 4th, Cfs., 5-20th.....	100	91	92
At. Coast Conv. 5th.....	100	95	95
At. Coast S. C. 4th.....	100	79	80
Balto. & Annap. 8th.....	100	105½	105½
Charleston & Western Car. 5th.....	100	95	95½
Coal & Coke Railway 5th.....	100	100	104½
Col. & Green. 1st 6th.....	100	104½	104½
Florida Cen. & Pen. 5th.....	100	104½	104½
Florida Southern 4th.....	100	90½	90½
Georgia & Alabama 5th.....	100	105	105½
Georgia & Florida 5th.....	100	65	65
Ga., Car. & North. 1st 5th.....	100	104½	105½
Georgia Pacific 1st 6th.....	100	110	110½
Ga. South. & Fla. 1st 5th.....	100	105	106
Macon, Dublin & Savannah 5th.....	100	95	99½
New Orleans (Gt. North.) 5th.....	100	65	67
New Orleans, M. & C. 5th.....	100	86	86½
Petersburg Class A 5th.....	100	106	107
Petersburg Class B 6th.....	100	113	113
Potomac Valley 1st 5th.....	100	105	105
Raleigh & Augusta 1st 6th.....	100	113	115
Raleigh & Gaston 5th.....	100	106½	106½
Richmond & Danville 6th.....	100	102½	102½
Sav. Fla. & West. 5th.....	100	108½	108½
Seaboard Air Line 4th.....	100	85	86
Seaboard 4th, Stamped.....	100	85½	86
Seaboard Adjustment 5th.....	100	77	77½
Seaboard & Roanoke 5th.....	100	104	104
Seaboard & Roanoke 6th.....	100	100	100
South Bound 5th.....	100	107	108
Virginia Midland 5th 5th.....	100	105	105
Virginia Midland G. M. 5th.....	100	106¼	106¼
Wash., Balto. & Annap. 5th.....	100	87½	88
Western Maryland 4th.....	100	83½	83½
Western N. C. Con. 6th.....	100	104½	102
Wilmington & Weldon 5th.....	100	109	109

Street Railway Bonds.	Par.	Bid.	Asked.
Anacostia & Potomac 5th.....	100	98½	98½
Anacostia & Potomac 5th, Gtd.....	100	100½	105
Atlanta Con. Street Railway 5th.....	100	104½	104½
Augusta Railway & Electric 5th.....	100	101	102½
Balto., Sp. Pt. & C. 4th.....	100	96½	96½
Baltimore Fraction 1st 5th.....	100	105½	106½
Charleston City Railway 5th.....	100	103½	103½
Charleston Con. Electric 5th.....	100	97	97
City & Suburban 5th (Balto.).....	100	104½	104½
City & Suburban 5th (Wash.).....	100	103½	103½
Danville Trac. & P. 5th.....	100	94	94½
Fairmont & Clarksburg Trac. 5th.....	100	101	101½

Lexington Railway 1st 5th.....	90½	95
Macon Railway & Light 5th.....	98	98
Maryland Electric Railways 5th.....	97	97¾
Metropolitan 5th (Wash.).....	104½	106½
Monongahela Val. Trac. 5th.....	94½	94½
Newport News & Old Pt. 5th.....	99	101
Newport News & Old Pt. G. M. 5th.....	77½	79
Norfolk & Atlantic 1st 5th.....	93¾	94½
Norfolk & Portsmouth Trac. 5th.....	91½	92
Norfolk Railway & Light 5th.....	99½	100
Norfolk Street Railway 5th.....	105	107
United Railways 1st 4th.....	84½	85
United Railways Income 4th.....	86	87¾
United Railways Funding 5th.....	87	87¾
United Railways Notes 5th.....	100½	102
Virginia Railway & P. 5th.....	94½	95

Miscellaneous Bonds.	Par.	Bid.	Asked.
Ala. Con. Coal & Iron 5th.....	80	80	80
Baltimore Brick 5th.....	82½	83½	83½
Baltimore Elec. 5th, Stp.....	99½	99½	99½
Consolidated Gas 5th.....	107½	107½	107½
Consolidated Gas 4th.....	94½	95	95
Con. Gas, Elec. Lt. & P. 4th.....	89½	90	90
Con. Gas, Elec. Lt. & P. Notes.....	97½	100	100
Consolidation Coal Ref. 4th.....	92½	93	93
Consolidation Coal Ref. 4th.....	92½	93	93
Fairmont Coal 1st 5th.....	86	86½	86½
G. B. S. Brewing 1st 4th.....	48	59	59
G. B. S. Brewing Income 5th.....	8	10	10
Mt. Vernon-Woodbury Cot. Duck 5th.....	76½	77	77
United Elec. Lt. & P. 4th.....	93	93½	93½

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending February 3.

Abbeville Cotton Mills (S. C.).....	Bid.	Asked.
Aiken Mfg. Co. (S. C.).....	70	75
American Spinning Co. (S. C.).....	65	65
Anderson Cotton Mills (S. C.).....	48	48
Anderson Cot. Mills (S. C.) Pfd.....	100	100
Arcadia Mills (S. C.).....	90	90
Arkwright Cotton Mills (S. C.).....	99	100
Belton Mills (S. C.).....	100	110
Brandon Mills (S. C.).....	90	90
Brogan Mills (S. C.).....	60	60
Chilholo Mfg. Co. (S. C.).....	160	160
Clifton Mfg. Co. (S. C.) Pfd.....	97	100
Clinton Cotton Mills (S. C.).....	120	120
Courtney Mfg. Co. (S. C.).....	93	93
Dallas Mfg. Co. (Ala.).....	99	99
D. E. Converse Co. (S. C.).....	75	75
Drayton Mills (S. C.).....	90	90
Eagle & Phenix Mills (Ga.).....	106	106
Easley Cotton Mills (S. C.).....	162	175
Enoree Mfg. Co. (S. C.).....	25	62
Enoree Mfg. Co. (S. C.) Pfd.....	85	100
Gaffney Mfg. Co. (S. C.).....	72	75
Gainesville Cotton Mills (Ga.).....	72	80
Glenwood Cotton Mills (S. C.).....	100	100
Graniteville Mfg. Co. (S. C.).....	135	145
Greenwood Cotton Mills (S. C.).....	57	60
Grendel Mills (S. C.).....	90	100
Hartsville Cotton Mill (S. C.).....	160	160
Henrietta Mills (N. C.).....	100	175
Inman Mills (S. C.).....	100	100
King Mfg. Co. J. P. (Ga.).....	80	85
Lancaster Cotton Mills (S. C.).....	130	130
Lancaster Cot. Mills (S. C.) Pfd.....	97	100
Langley Mfg. Co. (S. C.).....	75	75
Laurens Mills (S. C.).....	125	125
Limestone Mills (S. C.).....	155	160
Lockhart Mills (S. C.).....	60	60
Lockhart Mills (S. C.) Pfd.....	90	95
Loray Cotton Mills (N. C.) Pfd.....	90	90
Marlboro Cotton Mills (S. C.).....	75	75
Mills Mfg. Co. (S. C.).....	90	102
Molokan Mfg. Co. (S. C.).....	90	90
Monaghan Mills (S. C.).....	100	100
Monarch Cotton Mills (S. C.).....	120	120
Newberry Cotton Mills (S. C.).....	125	120
Ninety-Six Cotton Mills (S. C.).....	130	150
Norris Cotton Mills (S. C.).....	115	115
Orr Cotton Mills (S. C.).....	90	92
Pacolet Mfg. Co. (S. C.).....	94	94
Pacolet Mfg. Co. (S. C.) Pfd.....	95	100
Parker Common.....	20	20
Parker Pfd.....	63	63
Pelzer Mfg. Co. (S. C.).....	120	120
Poe Mfg. Co. F. W. (S. C.).....	102	102
Saxon Mills (S. C.).....	120	120
Spartan Mills (S. C.).....	110	125
Trion Mfg. Co. (Ga.).....	130	130
Tuacpan Mills (S. C.).....	200	250
Union-Buffalo (S. C.) 1st Pfd.....	60	60
Union-Buffalo (S. C.) 2d Pfd.....	15	15
Victor Mfg. Co. (S. C.).....	110	115
Warren Mfg. Co. (S. C.).....	80	90
Warren Mfg. Co. (S. C.) Pfd.....	100	105
Washington Mills (Va.).....	28	28
Washington Mills (Va.) Pfd.....	106	110
Watts Mills (S. C.).....	110	110
Whitney Mfg. Co. (S. C.).....	110	110
Williamson Mills (S. C.).....	120	125
Wiscasset Mills (N. C.).....	135	135
Woodruff Cotton Mills (S. C.).....	95	100
Woodside Cotton Mills (S. C.).....	100	100

FINANCIAL CORPORATIONS.

Ala., Attalla.—A new bank is reported organized with \$50,000 capital.

Ala., Bay Minette.—The Bank of Bay Minette is reported being organized with \$10,000 capital.

Ala., Birmingham.—Yeatman, Johnson & Lowman is the name of a new general insurance agency reported organized by John T. Yeatman, Bertha H. Johnson of Montgomery and John S. Lowman of Birmingham.

Ala., Decatur.—Official: The Title Abstract Co. of Alabama, successor to Morgan County Abstract Co., extending business into other counties, is incorporated; capital \$25,000. Incorporators: F. E. Littlefield, trustee; F. E. Littlefield, president and manager; Fred B. Littlefield, treasurer; John M. Maxwell, vice-president and secretary; P. J. Edwards, all of Decatur, and E. H. Allison of New Decatur. Business has begun.

Ala., Hayneville.—The Planters & Merchants' Bank is reported being organized to succeed the Bank of Hayneville. Walter S. Richardson of Montgomery may be able to give information.

Ark., Paris.—Official: The Bank of Commerce Incorporated; capital \$25,000, with \$10,000 subscribed and paid up; Ezra J. Morgan, president, Fort Smith, Ark.; C. M. Morgan, vice-president, Chester, Ark., and C. E. Pyer, secretary and treasurer, Paris, Ark.

Ala., Pell City.—The Pell City Bank is reported organized with \$50,000 capital. McLane Tilton, Jr., is said to be the principal promoter.

Ala., Tuscaloosa.—The Commercial Bank is reported to have begun business with an authorized capital of \$60,000. A. H. Dabbs of Carrollton, president; W. B. Oliver, vice-president, and J. J. Neilson, cashier. Directors: A. H. Dabbs, J. M. Hasson, Zimri Shirley, W. H. Hargrove, T. T. Quarles, A. Brown, Fleetwood Rice, S. D. McGee, Henry H. Leland, Dr. H. C. Hassell, Fred R. Maxwell, Sr.

Ark., Camden.—The Ouachita County Abstract Co. is reported incorporated by J. A. Reynolds, M. W. Elkins of Little Rock, Dr. C. S. Early, Henry Berg, Leo Berg, W. H. Hall, H. E. Meek, A. N. Meek, W. P. Ritchie, Edward Bower and Harry Solmsion.

Ark., Fountain Hill.—The Fountain Hill Bank is reported chartered; capital \$25,000; E. W. Ester, president; L. W. Dillard, vice-president, and L. J. Savage, secretary and treasurer.

Ark., Monticello.—The Commercial Loan & Trust Co. is reported organized with \$20,000 capital. J. L. Allen, president; George W. Lambert, vice-president, and George Knox, cashier. Business is to begin March 1.

Fla., Haines City.—Official: The State Bank of Haines City chartered; capital \$15,000; surplus \$3,000. Directors: Arthur E. Donegan, president, Kissimmee, Fla.; J. T. Miller, vice-president; C. C. Young, cashier; L. W. Smith and D. B. Ohlinger, all of Haines City, Fla. Business began January 22.

Fla., Jacksonville.—The Southern Building and Loan Association has made application for charter; capital \$50,000; incorporators, J. T. Thompson, J. C. Twitty, O. P. Woodcock and Ira J. Carter.

Ga., Atlanta.—A new trust company with \$1,000,000 capital and \$250,000 surplus is reported being organized by Joel Hurt, Belling H. Jones, Reuben R. Arnold, H. M. Willett, Dr. T. P. Hinman, W. J. Blalock, Porter Langston, J. J. Haverly, Dr. Bates Block, W. F. Winicoff, A. B. Simms, Clarence Haverly, Clyde King, M. M. George, R. F. Shedden, C. A. Horne and John C. Hallman.

Ga., Claxton.—The First National Bank of Claxton is reported organized with \$25,000. Stockholders: D. A. Smiley, A. L. Tippins, M. V. Overstreet, J. F. Lightsey, A. L. DeLoach, E. B. Barrow, E. H. Sikes, E. K. DeLoach, A. J. Edwards, Rev. D. F. Sheppard, Dr. J. L. Kennedy, J. S. Daniels, M. H. Glisson, J. B. Brewton, W. B. DeLoach, Remer E. DeLoach, A. Walpert, J. J. Whitten, D. L. Calloway, J. E. Whitten and J. M. Easterling. Officers: President, D. A. Smiley; vice-president, A. L. Tippins; cashier, J. B. Brewton. Directors: D. A. Smiley, A. L. Tippins, J. J. Whitten, J. F. Lightsey, M. H. Glisson, M. V. Overstreet and A. L. DeLoach.

Ga., Gainesville.—A new savings bank is reported being organized with \$50,000 capital. J. C. Pruitt, it is stated, will probably be president.

Ga., Moultrie.—Official: The Commercial Investment Co. incorporated; capital \$50,000. Incorporators: W. C. Vereen, R. J. Corbett, W. H. Barber, J. A. Carlton, C. W. Pidock, F. R. Pidock and A. H. Huber. Business is to begin at once.

Ga., Valdosta.—The Ashley Trust Co., capital \$100,000, is reported being organized by D. C. Ashley, J. N. Dray, G. W. Varn, T. M. Smith, C. R. Ashley, J. Y. Blitch, J. R. Dasher, J. M. Ashley of Douglas; George L. Patterson, J. B. Copeland, Agial Winn, J. M. Smith, M. R. Ousley, O. K. Jones, G. Y. McRee, J. H. Simms, A. S. Pendleton, C. C. Giddens, J. A. Dasher and S. M. Varndoe.

La., New Orleans.—The Suburban Investment Co., capital \$10,000, has made application for charter; directors, Joseph A. Blythe, Robert H. Burton, Erwin C. Lea, Leonidas C. Farrell, William S. Hero, Clarence H. Nebel, Nicholas J. Clesi, Oliver F. Ernst and William H. Block.

La., New Orleans.—Regarding the reported organization of the New Orleans Casualty Co., the assistant manager writes that the company began business in March, 1911.

Md., Baltimore.—The Bardishever Building, Loan and Savings Association of Baltimore City, capital \$500, is incorporated by Abraham Rachonow, Harry Charkatz, Louis

Epstein, Jacob Caplan, Benjamin Goldberg, Max Kabie, Jacob Rubin, Louis Wachs, Jacob Speizer and David Bucoff.

Md., Baltimore.—Official: The American Indemnity Co., incorporated under general law with \$500,000 capital and \$500,000 surplus, will begin April 1. J. Arthur Nelson will be president and J. Barry Mahool first vice-president.

Miss., Greenwood.—The Citizens' Bank, capital \$100,000, is reported organized by Geo. A. Wilson, Sr., Geo. A. Wilson, Jr., and others. Officers: President, G. A. Wilson, Sr.; vice-president, A. F. Gardner, and cashier, George A. Wilson, Jr. This is said to be a reorganization of the Bank of Leflore.

Miss., Woodville.—A movement is reported under way to organize a new bank, capital to be about \$20,000.

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DOUGLAS H. THOMAS, President
JNO. B. RAMSAY, V.-P. and Chm. Bd. of Dir.
WM INGLE, Vice-President.
JOHN B. H. DUNN, Cashier.
Capital \$2,000,000 Deposits \$21,670,000
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REALTY DEPARTMENT has sites for manu-
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WM. G. TAYLOR, Treasurer.
HARRY W. DAVIS, Secretary.
W. W. PUSEY, 2d Title and Real Estate Officer.

H. B. Wilcox, President Blanchard Randall, V.-Pres.
Wm. S. Hammond, Cashier
Saml. W. Tschudi, A. Cash. R. E. Bolling, A. Cash.

The First National Bank

17 South St., Baltimore, Md.

Capital - - - - \$1,000,000
Surplus and Net Profits - - 400,000
Deposits - - - - 6,500,000
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vite correspondence and interviews.

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Capital, \$1,000,000
July 15th, 1908, Surplus and Profits, \$671,631.60
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WALDO NEWCOMER, President.
SUMMERFIELD BALDWIN, Vice-Pres.
R. VINTON LANSDALE, Cashier.
C. G. MORGAN, Asst. Cashier.
Accounts of Mercantile Firms, Corporations, Banks
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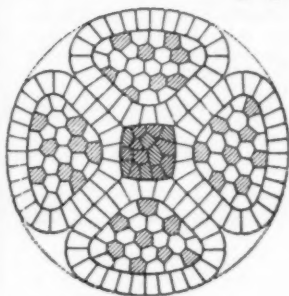
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Baltimore City Stocks.....	\$2,554,847.47	Capital Stock.....	\$1,500,000.00
Other Stocks and Bonds.....	3,453,771.23	Surplus	2,700,000.00
Loans on Approved Collateral:		Undivided Profits.....	477,220.94
Time.....	\$1,714,567.43	Deposits:	
Call.....	3,707,265.26	Subject to check.....	\$6,545,026.16
Office Building and Lot.....	5,421,832.69	Time	2,340,836.80
Unsettled Open Bond Accounts,		In Trust.....	246,509.19
etc. (Secured).....	168,775.18		9,132,372.15
Cash in Hand and in Banks.....	1,836,645.01	Interest, &c.....	6,278.67
	\$13,816,871.68		\$13,816,871.68

Statement December 31, 1912.

rators, R. C. Montgomery, Leon Gilliam and O. E. Patterson.

Tex., Taylor.—Reported chartered: First Bank & Trust Co., capital \$150,000; incorporators, Robert J. E. Eckhart, O. E. Roberts and T. W. Marse.

Tex., Vera.—The First National Bank of Vera, capital \$25,000, is reported being organized; H. S. Plants, R. O. Harvey, L. E. Hill, R. C. Plants, G. M. Head and J. Boone, directors; E. S. Breedlove, correspondent, Vera, Tex.

Tex., Welcome.—A new bank is reported being organized by Ben Wickler, Paul Ehler and Rev. August Betelt.

Va., Radford.—The Radford State Bank, capital \$25,000 to \$35,000, is reported organized with John G. Osborne, president; John L. Einstein, cashier; Frank Bell of Dublin, vice-president, and the directors thus far selected are R. M. Chumbley, J. G. Osborne, H. T. Einstein, H. T. Roberts and A. P. Goldsmith.

W. Va., Bluefield.—The Baldwin Investment Corporation, capital \$50,000, is reported incorporated by W. G. Baldwin, D. B. Baldwin and Mrs. Katie Baldwin of Bluefield, and E. G. Baldwin and W. D. Baldwin of Roanoke, Va.

W. Va., Charles Town.—The Dixie Building Association, authorized capital \$124,930, is reported being incorporated by Robert C. Rissler, George E. Hughes, Gerard D. Moore, H. C. Getzendanner, Garland H. Moore, C. L. Skinner, O. K. Phillips, S. M. Ott, F. Lewis Jordan and C. N. Campbell.

NEW SECURITIES.

Ala., Cullman.—March 10, it is reported, an election is to be held in Cullman county to vote on \$230,000 of road bonds.

Fla., Brooksville.—The election called for February 15 to vote on \$100,000 of 4½ per cent. 20-30-year Hernando county road bonds is reported postponed for two months.

Fla., Dade City.—Bids will be received, it is reported, until February 17 by D. M. McGeachy, City Clerk, for \$15,000 of 5 per cent. 30-year paving and school bonds.

Fla., Madison.—R. H. Rowe, Mayor, it is reported, received bids until February 4 for \$5000 of 6 per cent. 5-30-year water-main-extension bonds; denomination \$100 and \$500.

Fla., Plant City.—March 18, it is reported, an election is to be held to vote on sewerage and paving bonds.

Ga., Cornelia.—Official: On February 15 city will vote on sewer bonds. P. Duckett is City Clerk.

Ga., Eatonton.—Official: Defeated: Electric-light-plant bonds. L. M. Pennington is Mayor.

Ga., Jonesboro.—Official: Voted January 21: \$10,000 of 5 per cent. 1-20-year electric-light bonds; denomination \$500. Bids will probably be opened about March 1. J. W. Mundy is clerk.

Ky., Cadiz.—Official: Defeated: Trigg county road bonds. W. L. Davis is Clerk.

Ky., Horse Cave.—W. G. McGuire, secretary, School Board, writes that \$12,000 of bonds will be sold in March. T. A. Dunagan, chairman, Horse Cave Graded and County High School, should be addressed.

Ky., Lexington.—Reported that all bids received January 27 for the \$250,000 of 4 per cent. 40-year bonds were rejected. J. E. Cassidy is Mayor.

Ky., Munfordville.—Munfordville graded school district is reported to have voted bonds.

La., Crowley.—Official: D. M. Farson, Chicago, has purchased \$60,000 of 5 per cent. 1-31-year Sixth Ward and Crowley Drainage District, Arcadia parish, bonds to complete system of upland drainage; denomination \$500; dated November 1, 1912. Bonds were voted August 27, 1912. L. A. Williams is secretary.

La., Homer.—February 18, it is reported, an election is to be held to vote on \$40,000 of Homer school district No. 13, Claiborne county, high-school building bonds.

La., Marksville.—Reported that \$30,000 of water-works and electric-light bonds are to be issued.

La., Shreveport.—March 4, it is reported, an election is to be held to vote on \$50,000 of State Fair, \$150,000 of market-house and \$100,000 of street-improvement bonds.

La., Shreveport.—March 4, it is reported,

city will vote on \$350,000 of bonds for market-house and other improvements.

Md., Annapolis.—The \$500,000 of 3½ per cent. 10-15-year State road loan, Series "F," was awarded as follows: Alexander Brown & Sons, Baltimore, \$410,000 at 92.44; Daniel Annan, president, the Second National Bank of Cumberland, \$30,000 at 92.50; Hambleton & Co., Baltimore, \$30,000 at 92.53 and \$30,000 at 92.512.

Miss., Marks.—Official: H. W. Crenshaw, Crenshaw, Miss.; Leo Lesser, Tunica, Miss., and W. A. Cox of Marks will receive bids for Yazoo-Goldwater drainage district bonds.

Mo., Joplin.—An election is to be held within two months, it is reported, to vote on \$30,000 of school bonds. Address Board of Education.

Mo., Kansas City.—Bids will be received until 10 A. M. February 13, it is reported, by M. A. Flynn, City Comptroller, for \$200,000 of 4 per cent. water-works and \$200,000 of 4½ per cent. sewer bonds.

Mo., Maplewood.—Maplewood district will, it is reported, call a special election to vote on \$100,000 of school bonds.

N. C., Charlotte.—Official: Bids will be received until noon February 14 for \$50,000 of 4½ per cent. 30-year street-paving bonds; denomination \$1000; dated March 1, 1913. Address W. F. Stevens, chairman finance committee. Further particulars will be found in the advertising columns.

N. C., Huntersville.—Application has been made to the Legislature, it is reported, for authority to issue \$20,000 of high-school bonds.

N. C., Raeford.—Reported that application is to be made to the Legislature to vote on \$35,000 of school bonds.

N. C., Pineville.—A bill is to be introduced in the Legislature, it is reported, providing for the issuing of \$20,000 of school bonds.

N. C., Thomasville.—Official: Wm. Coler & Co., New York, purchased at par and accrued interest \$15,000 of 5 per cent. 30-year water and sewerage bonds; denomination \$1000; dated December 1, 1912; maturity 1942. C. G. Hill is Mayor and M. H. Stone Clerk.

Okla., Durant.—March 18, it is reported, an election is to be held to vote on \$55,000 of sewer and water system extension bonds.

Okla., Muskogee.—Reported that the \$153,000 of 5 per cent. 25-year park bonds will soon be offered by the City Council.

Okla., Tulsa.—Official: Voted January 21: \$175,000 of 5 per cent. 25-year serial bonds as follows: Convention hall, \$100,000; park, \$40,000; market, \$25,000; boulevard, \$10,000; denomination \$1000; dated February 1, 1913. F. M. Wooden is Mayor.

Okla., Sapulpa.—Bids were opened on February 3 for \$75,000 of 5 per cent. 20-year sewer, water and steam bonds; denomination \$1000. S. J. Smith is Mayor.

S. C., Bishopville.—Reported that a bill is being prepared providing for an election in Lee county to vote on \$15,000 of 20-year railroad building bonds.

S. C., Gaffney.—February 11, it is reported, an election is to be held to vote on \$30,000 of school bonds.

S. C., McColl.—Reported that it is proposed to call an election to vote on water-works bonds.

Tenn., Bristol.—Sullivan county is reported to have delivered to the purchaser, the First National Bank, its last issue of \$200,000 of road bonds.

Tenn., Lonsdale, P. O. Knoxville.—Bids will be opened about February 15 for \$20,000 of 5½ per cent. street-improvement and floating indebtedness bonds; maturity 1940. H. E. Christinburg is Mayor and C. L. Householder Recorder.

Tenn., Nashville.—A bill is to be introduced in the Legislature, it is reported, providing for the issuing of \$250,000 of bonds for armory building and auditorium.

Tenn., Nashville.—A bill is reported being prepared providing for the issuing of \$300,000 of high-school improvement bonds.

Tex., Anahuac.—Bids will be received un-

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W. B. LIVEZEY, President

OLD DOMINION LAND COMPANY
NEWPORT NEWS, VA.

til 10 A. M. February 15 for \$25,000 of irrigation bonds of Trinity River Irrigation district, Chambers county. Address J. E. Broussard, president board of directors.

Tex., Austin.—The Attorney-General is reported to have approved the following securities: \$10,000 of sewer and \$12,000 of water-improvement bonds of Wichita Falls, Tex.; \$20,000 of district No. 25 and \$20,000 of district No. 21, Sunset Heights school bonds.

Tex., Austin.—A. P. Woodridge, Mayor, says that the city will issue nine certificates of debt for \$10,000 each in payment on account of purchase of the old sewer company. One will be paid each year until the entire debt is liquidated.

Tex., Bay City.—March 1, it is reported, an election is to be held in Matagorda county to vote on \$300,000 of Precinct No. 1 road bonds.

Tex., Bay City.—March 1 an election is to be held, it is reported, to vote on \$300,000 of Matagorda county road bonds. It is said a Chicago firm has agreed to purchase the bonds at a premium, provided the election carries. W. S. Holman is County Judge.

Tex., Clarendon.—Reported voted: \$25,000 of school bonds.

Tex., Dickens.—February 8, it is reported, Dickens county will vote on \$100,000 of road bonds.

Tex., Fort Worth.—An election is to be held early in February, it is reported, to vote on \$300,000 of supplemental reservoir bonds.

Tex., Franklin.—Reported voted: \$150,000 of road bonds of Hearne precinct.

Tex., Franklin.—Official: Commissioners precinct No. 1, Robertson county, will issue \$50,000 of 5 per cent. 10-40-year road-improvement bonds, dated January 1, 1913; also \$150,000 of 5 per cent. 10-40-year road bonds, dated January 1, 1913. J. L. Goodman is County Judge.

Tex., Houston.—Fullerton-Cage school district is reported authorized to issue \$10,000 of 5 per cent. 20-40-year bonds.

Tex., New Boston.—Official: February 25 an election is to be held to vote on 5 per cent. 20-40-year water-works bonds. O. B. Pirkey is Mayor. Press reports give the amount at \$15,000.

Tex., Paris.—Official: February 4 city voted on \$40,000 of water-works improvement and \$45,000 of refunding bonds. Ed H. McCuiston is Mayor.

Tex., Richmond.—Official: Bids will be received until noon February 11 for \$175,000 of 5 per cent. 10-40-year Fort Bend county road bonds; dated February 10, 1913. W. I. McFarlane is County Judge. Further particulars will be found in the advertising columns.

Tex., Sunset Heights.—Reported that \$20,000 of district No. 25 and \$10,000 of district No. 21 school district bonds have been approved and will now be issued. L. L. Pugh is school superintendent of Harris county.

Tex., Temple.—An election is to be held in April, it is reported, to vote on \$170,000 of street paving, \$90,000 for sanitary and storm sewers, \$15,000 for Fire Department apparatus and stations and \$7500 for public parks.

Tex., Wichita Falls.—An election will probably be held, it is reported, to vote on \$30,000 of building bonds.

Va., Ashland.—Official: Defeated: \$50,000 of sewerage and water bonds. Henry G. Ellis is Mayor.

Va., Big Stone Gap.—Official: Bids will be received until noon February 11 for \$130,000 of Richmond magisterial district, and \$130,000 of Gladeville magisterial district 5 per cent. 20-30-year Wise county road bonds. Address E. J. Prescott, chairman Board of Supervisors, Big Stone Gap.

Va., Bridgewater.—Official: February 21 an election is to be held to vote on \$25,000 of 5 per cent. 10-20-year water and sewer bonds; denomination \$500; dated March 1, 1913. Address Otis W. Wins, chairman finance committee.

Va., Highland Park, P. O. Richmond.—Steps are reported being taken to hold an election to vote on \$75,000 of street and park bonds.

Va., Kenbridge.—Official: Bids will be received by the Bank of Lunenburg, W. S. Irby, cashier, until 2 P. M. March 1 for \$20,000 of 5 per cent. 20-year Lunenburg county road improvement bonds; denomination \$500. Further particulars will be found in the advertising columns.

Va., Rocky Mount.—Reported that city contemplates issuing \$200,000 of bonds for street pavement, sewerage and lights, sidewalks and floating indebtedness.

FINANCIAL NOTES.

The First National Bank of Spring City, Tenn., is reported to have absorbed the First National Bank of Spring City.

The Industrial Loan Co., St. Louis, Mo., is reported planning to increase its capital from \$200,000 to \$300,000 or \$500,000.

The First State Bank & Trust Co. of Abilene, Tex., proposes, it is stated, to increase its capital from \$100,000 to \$200,000.

The Commercial Bank & Trust Co. of Chattanooga, Tenn., is reported authorized to increase its capital from \$50,000 to \$100,000.

The National Bank of Garland at Garland, Tex., is reported to have changed its name to the State National Bank of Garland.

The Commercial Bank & Trust Co. of Knoxville, Tenn., is reported to have amended its charter, increasing its capital from \$50,000 to \$100,000.

The Oklahoma Savings and Loan Association, Oklahoma City, Okla., is reported authorized to increase its capital from \$1,000,000 to \$2,000,000.

The Citizens' State Bank of Memphis, Tex., is reported to have filed an amendment to its charter increasing its capital from \$50,000 to \$75,000.

The Tennessee Life Insurance Co. of Nashville, Tenn., is reported to have voted to consolidate with the International Life Insurance Co. of St. Louis.

The Citizens' Bank of Hinton at Hinton, W. Va., is reported to have made application to convert into the Citizens' National Bank of Hinton; capital \$50,000.

The Farmers & Merchants' Bank and Bank of Franklinton, both at Franklinton, La., are reported to have merged under the name of the Union Bank of Franklinton.

The State Bank of Kenedy, Tex., is reported to have amended its charter, changing its name to the First State Bank & Trust Co. and increasing capital from \$30,000 to \$60,000.

The Richland Savings Bank & Trust Co. and the Guaranty Trust Co. of South Carolina, both at Columbia, are, it is reported, to be consolidated under the name of the Guaranty Trust Co. of South Carolina.

E. T. Archer & Co., consulting engineers, Kansas City, Mo., say that S. G. Lathy, City Clerk, Miltonvale, Kan., will receive bids until February 10 for \$35,000 of 5 per cent. 30-year water-works and electric-light bonds.

The following banks in Texas have been authorized to increase their capital: Merchants' State Bank of Teague, from \$35,000 to \$60,000; Rio Grande Valley Bank & Trust Co., El Paso, from \$300,000 to \$500,000; Austin County State Bank, Bellville, from \$30,000 to \$60,000; First Guaranty State Bank, Quanah, from \$25,000 to \$50,000; Hill County State Bank, Hillsboro, from \$50,000 to \$100,000; First State Bank, Ben Franklin, from \$10,000 to \$15,000; Marfa State Bank, from \$25,000 to \$50,000.

Mackubin, Goodrich & Co., bankers, 110 E. German St., Baltimore, Md., have issued a booklet entitled "Financial Review of the Year 1912." It gives the high, low and last quotations for 1912 and the high and low for 1911 on all stocks and bonds traded in on the Baltimore and New York stock exchanges, also Baltimore's financial statement and taxable basis, population and other information, besides the "Rule" formulated by the Judges of the Supreme Bench governing the investment of all trust funds under the jurisdiction of the equity courts of Baltimore.

The Electrical Engineer in Southern Development.

Editor Manufacturers Record:

Though receiving little credit for it, the electrical engineer has played no insignificant part in the economical and industrial development of the New South during recent years. Even at that, however, the engineer has not really come into his own in the true sense; or, in other words, a great many captains of industry allow their electrical work to be designed, installed and operated by ordinary mechanics, or even inexperienced workmen, without realizing the great gain in economy and convenience that might accrue from placing this work in the hands of an experienced electrical engineer. It is true, of course, that our large central stations, our hydro-electric plants and our long interurban systems are dependent directly on the engineer,

but the time is coming when the small manufacturer or consumer of electricity will realize that it is eminently to his advantage to place his work, especially the designing, in the hands of those acquainted with the intricacy of such equipment.

The architect is retained for buildings of all sizes from the four-room cottage to the palatial mansion, and this has done wonders for the artistic and economic progress of building operation: just so, when the popular mind has been educated to refrain the electrical engineer on those questions in which he is intimately acquainted and upon which he has spent years of study and of hard work, then we may expect to see a marked advance in the quality and excellence of design in the smaller electrical installations throughout the South.

Well do we remember the beginning of that now hackneyed expression, "Electricity is the coming power," and now, on the dawn of the most glorious epoch the South has ever seen, this lightning power seems to be the life, the essence of the very age in which we live.

Stop a moment and imagine a city, if you please, without electric light; no trolley cars to move from place to place; no telephone or telegraph to span with words the tedious miles; no fire alarms; no silent electricies floating down the street; no motor power to drive our mills from a distant water plant; few modern conveniences to which we are so firmly wed. Truly a gloomy aspect! Separate us from the all-pervading "juice" and you will set us just 50 years behind our time.

For all this progress we must thank our engineers, tireless in their efforts to add to the conveniences and happiness of mankind. Nor must we overlook the fact that much of the present New South is due to the efforts of our electrical engineers, and to them we must look for the brilliant future advances in science and industrial enterprise.

The syndicate and the capitalist, with their millions, can wield a mighty influence in developing the latent resources of "God's own country," but even they must call on the humble engineer to plan, to estimate and finally to erect those towering landmarks of industry with which our South is dotted.

Then let us hope for the time when every manufacturer and every consumer of electricity, however small, will realize the economic position of our Southern electrical engineers and render unto them the support and assistance they deserve.

D. R. SHEARER, C.E.

Knoxville, Tenn.

Progress of Northeast Louisiana.

[Special Cor. Manufacturers Record.]

Monroe, La., January 31.

The city of Monroe, Ouachita parish, is now completing an elaborate drainage system, to be followed by the additional paving of some 30 business blocks, and the graveling of residence streets. The city owns a gravel pit on the west side of Ouachita River, three miles from the city hall. Mayor Forsythe, who has "been on the job" going on 16 years, is able to find local money for improvements.

The police jury of the parish has had a State engineer examine some 90 miles of public roads on the east side of the river, which is mostly valley and swamp lands. These roads are now side ditched, but need to be graveled, oiled with crude oil and sanded, at a cost of about \$2000 per mile. The gravel and sand is available just a few miles from Monroe, and the crude oil in tank cars from the Caddo field. An election for a bond issue will be called soon.

The Chamber of Commerce, that succeeded the Monroe Progressive League, is ready for business, with \$6000 in hand and a committee going after \$4000 more. Charles Tick is president, and Luther Ellison, late of Texas, is secretary. This body has invited the police juries of Caldwell, Ouachita, Richland and Morehouse parishes to appoint commissioners, who will be the guests of the Chamber of Commerce, to meet in Monroe on February 19 to consider the problem of draining the great Bayou La Fourche basin in the parishes and tributary streams. The chief State engineer and engineer of railways interested will address the convention, and some propaganda of educating the people on drainage and reclamation will be inaugurated. There are several hundred thousand acres in the four parishes to be reclaimed in this decade or the next.

Our neighbors, Ashley, Drew and Chiest counties, in Arkansas, are draining their water across the State line into Louisiana, and something has to be done.

Chamber of Commerce.

Monroe, La., January 29.

A conference will be held here on February 19 for the discussion of plans and means relative to draining the famous La Fourche Basin, which lies a few miles east of Monroe and is partly in the parishes of Ouachita, Richland, Morehouse and Caldwell. What is known as the La Fourche Basin is a large area, aggregating some 300,000 acres of rich, fertile, alluvial lands heretofore practically worthless, by reason of overflow, and to bring about a reclamation of these valuable lands is the sole object of the convention.

Major Frank M. Kerr, chief engineer of the Louisiana State Board of Engineers, together with his assistant, Mr. Robertson, has been advised with relative to this undertaking, and is now preparing statistics, plans, specifications, etc., to be used at this conference; also all local and railway engineering departments have the matter under advisement.

The Police Juries of all parishes included in this district have promised their hearty co-operation in this laudable undertaking, and the railway officials of all lines traversing this territory have promised their valuable support.

When one takes into consideration the vast importance of this proposed improvement—that of reclaiming so many valuable acres of such fine agricultural lands to the people and the State at large—the significance of same can hardly be comprehended, and from present indications and the interest being manifested the proposed scheme bids fair to materialize in an assured proposition.

At a recent meeting of the City Council it was decided to do considerable street paving in the near future. The City Engineer was instructed to draw plans and specifications for the paving of certain streets, and work is expected to begin at an early date. Considerable building is going on, and the city is now enjoying a splendid substantial commercial growth.

LUTHER ELLISON, Secretary.

Want a Cotton Compress.

Board of Trade,
Cooper, Tex., January 28.

Editor Manufacturers Record:

We would like very much to locate a cotton compress here, and would like to be put in communication with manufacturers of compresses or other parties who would be interested in building a compress at this point. It is an excellent opportunity for the right parties, and would be a good paying proposition.

R. D. STERNE, Secretary.

DEEP PLOWING WITH

+

DU PONT

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Red Cross Dynamite

MAKES BIGGER CORN CROPS



CORN GROWING ON DYNAMITED SOIL

CORN GROWING ON SOIL NOT DYNAMITED

Result of Experiment with Du Pont Red Cross Dynamite on Clarksville, Tennessee, Experiment Farm

Dynamiting Subsoil Increases Corn Crop on Poor Land

CITY BOARD OF EDUCATION,
S. L. Smith, Superintendent.
Clarksville, Tenn., Oct. 15, 1912.
E. I. du Pont de Nemours Powder Co.,
Wilmington, Del.:

Gentlemen—In regard to the effects of the acre you dynamited for us in December, 1910, I will say that—

1. We planted another acre adjoining it in corn at the same time, cultivated it exactly in the same manner, using the same amount and kind of fertilizer, etc., and on the acre dynamited the yield was about 95 bushels per acre; on the acre not subsoiled with dynamite, but with other conditions the same, the yield was 70 bushels per acre. This was in the fall of 1911.

2. In the spring of 1912 we planted both acres again in corn, as we were anxious to test the experiment fully. The corn has not yet been gathered, but it has been examined by a number of good farmers, who had no trouble in ascertaining the exact boundary of the land subsoiled by dynamite, as it has larger stalks, better ears, and remained green much longer than the other acre. It stood the short drouth of the summer very much better, as it had the rain that had been conserved in the winter.

The work had been carried out by Mr. B. B. Ezell, our agriculturist in the High School. You can communicate with him at Charleston, W. Va. He has been appointed there by the Government, as State agent.

3. Taking it all around, I believe that it will pay to subsoil with dynamite, even the first year.

S. L. SMITH.

DEEP plowing with Red Cross Dynamite is doubling corn crops. Explosions of Red Cross Dynamite shatter the compact subsoil. They fissure and mellow the subsoil to a depth of four to six feet. Instead of corn roots growing in a six-inch root bed, the dynamiting method provides six feet of rich soil, replete with natural fertilizer, thoroughly aerated and easily penetrated by corn roots. Such ideal growing conditions are possible in your corn field. It requires no more land to largely increase your corn crops if you use Red Cross Dynamite for deep cultivation than was necessary under the old plan.

Another advantage gained by using Red Cross Dynamite is the conservation of moisture. With the soil shattered and thoroughly porous, excessive rainfall percolates downward and is conserved, and becomes available when drouths compel roots to seek moisture in the deeper subsoil.

Subsoiling present corn fields with Red Cross Dynamite is practical farming—more bushels to the acre and better quality. Two acres of dynamited corn land yields more than three undynamited, is the estimate of farmers.

WRITE FOR FREE BOOKLET

Telling how Red Cross Dynamite is safely, easily and cheaply used for subsoiling, tree-planting, ditching, regenerating orchards, removing stumps and boulders, road-making, excavating, etc. State location of farm and whether you wish name of nearest dealer or the services of an experienced blaster when writing for Farmers' Handbook No. 369.

Second Year Results Greater Than First

Anderson, S. C., September 23, 1912.

In reference to breaking land with dynamite for farming purposes will say that the land so broken in the spring of 1911 shows a greater improvement than it did the first year. The upland corn was at least 40% better than the corn raised on adjoining land that was not dynamited. I dynamited four acres this year, and I find a great difference in the corn compared with the adjoining land. The greatest difference, as stated above, is the second year.

J. S. FOWLER.

Governor and Dynamite Get 103 Bushels of Corn to Acre

Governor Brown of Georgia has been highly pleased at the results obtained on his Cherokee county farm by breaking up the ground with dynamite. On ground thus broken last year he raised 106 bushels of corn per acre, where the former yield had been 25 bushels.

In commenting on the value of deep plowing with dynamite, the Governor concluded by saying:

"Not only do the roots strike down twelve or fifteen inches, but the water rises up through the broken soil."

"I am a great believer in deep plowing, and in deep plowing with dynamite if the explosive is carefully handled."

Atlanta Constitution.

Later Report.

Under date of November 5, 1912, the Atlanta Constitution refers to Governor Brown's corn crop as follows: "Governor Brown has just returned from his farm in Cherokee county, where last week the yield from one acre was measured up and found to be 158 bushels."

E. I. du Pont de Nemours Powder Co.

PIONEER POWDER MAKERS OF AMERICA

Established 1802

WILMINGTON, DEL.

